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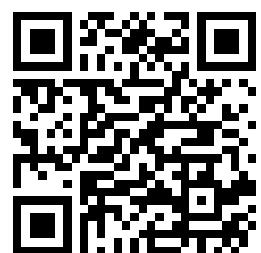
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ON-LINE SERVICES REFERENCE MANUAL

January 1978

MEDLARS Management Section

Bibliographic Services Division

U.S. National Library of Medicine

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

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**DBIR
DEFINED**

DBIR (Directory of Biotechnology Information Resources) is a multi-component data bank containing information on a wide range of resources related to biotechnology. These resources may be online databases and networks, publications such as books and compendiums, organizations, collections, and repositories of cells and subcellular elements. DBIR also identifies groups and agencies working on issues of nomenclature in biotechnology and molecular biology. The file is part of the National Library of Medicine's (NLM) Toxicology Data Network (TOXNET®).

**DBIR FILE
STRUCTURE**

DBIR contains 28 data fields, arranged in three broad subject categories (shown below) plus a category for administrative information:

Resource Identification
Keywords/Descriptors
Data Type Specific Information

Resource Identification data include information such as names of organizations, publications, or databases, relevant addresses or phone numbers, and related DBIR records. Keywords, drawn from NLM's Medical Subject Headings (MESH) and other special sources, are assigned to each record to allow for ease in searching for particular concepts. Data Type Specific Information includes ISBN numbers for books, numbers of records for databases, etc.

**SEARCHING
DBIR**

DBIR is searchable in NLM's TOXNET system. Utilizing a free text search capability, full Boolean logic, a powerful and flexible command language, and a variety of online user assistance features, TOXNET offers convenient searching. Online and offline printing of entire or specified portions of records is available. A variety of other print options allows additional customized formats.

**WHAT TO USE
DBIR FOR**

DBIR can be used to answer such questions as:

- o What databases contain information on cloning vectors and where can these vectors be obtained?
- o Are there any university affiliated biotechnology centers in New York State?
- o Is there software available to analyze molecular sequences?
- o Are there any publications which focus on the interaction of biotechnology and the law?
- o Is there a source for pathogenic fungi in England?
- o Is the GenBank Genetic Sequence Data Bank available on magnetic tape, and if so, whom can I contact about getting a copy?

**DBIR
AVAILABILITY**

DBIR is available 24 hours/day, 7 days/week, except for a brief daily maintenance period.

DBIR ACCESS

Registered NLM online services users can access the TOXNET system by direct dial or through the TELNET or TYMNET telecommunication networks.

**DBIR USER
SERVICES**

**For detailed information
on DBIR contact:**

**Specialized Information
Services Division
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894**

**Telephone: 301-496-6531 or
301-496-1131**

**For information on
additional MEDLARS®
services contact:**

**MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894**

**Telephone: 800-638-8480 or
301-496-6193 (inside Maryland)**

(Note: DBIR is also available as part of NLM's DIRLINE® (Directory of Information Resources Online) file. Information about searching it in this format is available by calling any of the above phone numbers).

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A comprehensive manual for the operation of the various NLM on-line data bases. Contains specific information on modes of accessing these data bases, the commands which may be used, techniques for searching them, etc. Includes instructions on the use of MEDLINE, SDILINE, CATLINE, AVLINE, Name Authority File, SERLINE, TOXLINE, CHEMLINE, RTECS, TDB, CANCERLIT, CANCERPROJ, CLINPROT, EPILEPSY, and MEDLEARN.

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Manuals

Search Structuring

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CATLINE	CANCERPROJ	
SERLINE	CLINPROT	
CHEMLINE	EPILEPSY	
TOXLINE	MEDLEARN	

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BETHESDA, MARYLAND 20014
301-496-6193 OR 800-638-8480

This manual has been prepared through the cooperative efforts of staff from the National Library of Medicine's MEDLARS Management Section, Bibliographic Services Division, Office of Computer and Communications Systems, Technical Services Division, Medical Subject Headings Group, Specialized Information Services and the Office of Inquiries and Publications Management. Input was also received from the National Cancer Institute and the National Institute of Neurological and Communicative Disorders and Stroke. Please send comments, suggestions, corrections or additions to the MEDLARS Management Section.

We gratefully acknowledge the many comments and suggestions we received from various reviewers.

Please note the following terms used in this manual are trademarked:

CATLINE	MEDLARS
CANCERLINE	MESH
CHEMLINE	SERLINE
COMPFILE	TOXLINE

5-24-70

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PART 1

INTRODUCTION TO NLM ON-LINE SYSTEMS

1.1 CHANGES IN THE ON-LINE SERVICES REFERENCE MANUAL

This 1978 edition of the On-Line Services Reference Manual contains numerous changes. Descriptions of two new data bases have been added, CLINPROT (Clinical Protocols) and RTECS (Registry of Toxic Effects of Chemical Substances). A "Mini-Manual" has also been added, which is intended to be a quick-reference tool for use at the terminal. In addition, the computer-assisted instruction program MEDLEARN is described. Every part of the Manual has been updated and revised. To assist the user to find information in the Manual, the Index has been completely restructured using numbered sections. It is hoped that this new method of numbering the portions of each part will make the information in the Manual more easily accessible.

Following is a brief history of the National Library of Medicine's search service including MEDLARS, AIM-TWX and MEDLINE.

1.2 MEDLARS

The National Library of Medicine first began to experiment with on-line bibliographic search services in the fall of 1967. For three years prior to that time, NLM had been using a computerized system for the production of Index Medicus and for individualized "demand searches" of the Index Medicus data base which were processed in batches against the entire file. This computer system, called MEDLARS (Medical Literature Analysis and Retrieval System), had been expanding with the growth of biomedical literature and with the increasing number of demand searches processed. (The term MEDLARS still refers to the entire NLM system.)

Obtaining a demand search was slow and expensive. The time from the original request by a health professional, through the "formulation" of the request by a trained analyst and processing by the computer, to the final review and mailing of the bibliography to the requester, was usually three to six weeks. Clearly a much more rapid and effective system was needed to keep up with the demand.

1.3 AIM-TWX

In January 1970 NLM began publication of Abridged Index Medicus (AIM), an index to articles in 100 English-language journals in clinical medicine. The acceptance AIM received from the biomedical community encouraged NLM to choose this small data base as a useful file for an initial pilot study. The problem of access was solved when arrangements were made to connect an IBM 360/67 computer at the System Development Corporation in California to the Teletypewriter Exchange Network (TWX). The new experimental search service, AIM-TWX, became operational in June 1970 at about 90 medical institutions. The response to AIM-TWX was enthusiastic and demonstrated the viability of an on-line network of users nationwide. However, participants expressed a need for a much larger data base and a less costly method of communicating with the computer. Planning for such a service began early in 1971. AIM-TWX is no longer operational.

1.4 MEDLINE

The system which replaced AIM-TWX was called MEDLINE (MEDLARS on-LINE) and became operational in October 1971. The first problem to be resolved in developing MEDLINE was to find a better and less expensive communications system. TYMNET and Telenet provide such a communications system.

The problem of a very small data base was resolved by increasing the file of bibliographic citations in MEDLINE to include all the references from approximately 1200 of the 2300 journals indexed in Index Medicus for the most recent three full calendar years, plus the current year. Thus, from 1971 to 1973 MEDLINE included about 60 percent of the material in Index Medicus, and represented those journals most frequently retrieved in searches of the literature.

In the meantime, the network of MEDLINE institutions grew from a small group, which included the eleven Regional Medical Libraries plus the former MEDLARS centers, to a group which now includes almost all major medical libraries in the United States as well as many smaller hospital and medical school libraries. In addition, institutions in Australia, Japan, Canada, Germany, Great Britain, France, Mexico, Iran, South Africa, Sweden, and Brazil have access to MEDLINE and other NLM data bases.

1.4.1 MEDLINE SYSTEM CHANGES

As the network of MEDLINE institutions grew, problems were discovered and changes were suggested. As a result, refinements were made in the structure of MEDLINE, new search capabilities were added, and additional data bases were made available on-line to the network.

Since 1971, when MEDLINE was first available for on-line searching, the journals indexed for this data base have been reviewed annually. However, as originally constructed, the data base had several shortcomings. For the user seeking a "few good recent citations" on a particular subject, MEDLINE was unnecessarily large; for the researcher seeking a "comprehensive bibliography" of a topic, MEDLINE was often too small. To fill these needs, two new journal citation data bases were added, i.e., SDILINE and COMPFILER.

In September 1972, SDILINE (Selective Dissemination of Information On-LINE) was made available as a subset of the MEDLINE file for those who wished to search only the most recent literature. All citations from the forthcoming monthly issue of Index Medicus may be searched on-line several weeks before that publication can be printed and distributed by the Government Printing Office.

In February 1973, the remaining citations from Index Medicus, which were not originally included in MEDLINE, were put into a separate data base called COMPFILER (COMplement FILE). In addition, this file included citations from "special lists" of journals used to produce the Index to Dental Literature and the International Nursing Index. This greatly increased the overall size of the journal citation data bases, but computer limitations and the increasing number of on-line users forced NLM to restrict the use of COMPFILER to two days per week and permit only the off-line printing of citations retrieved from on-line searches.

Early in 1974, the division between MEDLINE and COMPFILER was eliminated. All of the current citations from Index Medicus and the "special list"

journals were made available in one file: MEDLINE. This permitted full on-line access to between two and three years of the MEDLARS data base. Arrangements were made in March 1973 with the State University of New York in Albany to mount the MEDLINE and SDILINE data bases on its computer and link it to the TYMSHARE network. This has greatly increased the capability of the network to accommodate demands for services and has also provided a backup for the NLM computer.

In addition to these changes, several adjustments were made in the computer software and hardware at NLM to allow for greater flexibility in searching and for new program features. Title Word searching was added to SDILINE and the Stringsearch capability and a "Restack command were added early in 1973.

In the fall of 1973 an IBM 370/158 computer was installed at NLM; in November 1974 a second 370/158 was installed. These were combined in February 1975 to make a multi-processing system (IBM 370/158 MP). These changes in hardware and accompanying software improvements allowed for faster response time, network-wide broadcast messages, security for institution user codes, a display indicating approximate time for each completed search, access to general interest news files, and other conveniences for on-line users.

In September 1973, two new data bases were made available to the network. CATLINE contains full bibliographic data for all monographs, serials and technical reports cataloged at NLM and appearing in NLM book catalogs since 1965. SERLINE originally contained bibliographic and locator information for about 6500 biomedical serial titles which are current or have ceased publication since 1969. The current SERLINE contains some 28000 records.

In April 1974, the TOXLINE and CHEMLINE data bases were added to the NLM computer. TOXLINE (TOxicology Information On-LINE) contains citations dealing with toxicology, adverse effects of drugs and chemicals, environmental pollution, and industrial health and safety. CHEMLINE is an on-line chemical dictionary for all the chemical substances uniquely identified by Chemical Abstracts Service (CAS) Registry number in the TOXLINE data base.

In July 1974, the CANCERLITERATURE data base (originally called CCALINE) was made available to MEDLINE and TOXLINE users on the NLM computer. Developed by the National Cancer Institute CANCERLIT contains citations to published literature on cancer and reports of on-going cancer research. CANCERPROJ (Cancer Projects) was added in November 1975. AVLINE (Audiovisuals On-Line) and EPILEPSYLINE became available January 1976. CLINPROT (Clinical Protocols) was added in June 1977. Finally, RTECS (Registry of Toxic Effects of Chemical Substances) became available in July 1977.

1.5 MEDLARS II AND ELHILL 3

Except for the addition of new data bases the developments outlined above were all a part of the MEDLARS I system. The basic programs and procedures of MEDLARS which were used to publish Index Medicus and other recurring bibliographies and to process demand searches of the MEDLARS data base had not changed since the system was first used in 1964. On-line search capabilities expanded the utility of MEDLARS, but did not change its basic nature. The on-line search portion of MEDLARS was controlled by a separate package of software programs called ELHILL (an acronym derived for Senator Lister Hill,

for whom was named the Lister Hill National Center for Biomedical Communications and who was a co-sponsor along with then Senator John Kennedy of the legislation which created the National Library of Medicine from the Armed Forces Medical Library in 1956). ELHILL went through two changes during MEDLARS I: the AIM-TWX phase (ELHILL 1) and the MEDLINE phase (ELHILL 2). In the fall of 1974 the ELHILL 3 programs were installed. This improved software is described in PART 4.

The MEDLARS II system which incorporates the ELHILL 3 programs was accepted for operation in January 1975. This concluded a three and one-half year contract effort to develop a sophisticated, third generation bibliographic processing system and incorporated the set of functions performed by MEDLARS I.

1.6 NATIONAL LIBRARY OF MEDICINE'S CHARGES* FOR ON-LINE SERVICES (U.S.)

1	Each hour of Prime Computer Connect Time ** (10:00 a.m. - 5:00 p.m. Eastern time)	\$15.00				
2	Each hour of Non-Prime Computer Connect Time (before 10:00 a.m. and after 5:00 p.m.)	\$ 8.00***				
3	Each page of computer printout	\$.12				
4	Each stored search per month	\$ 1.00				
5	Each off-search, per file	\$ 1.00				
6	Minimum charge per user ID	\$15.00 per month				
7	Monthly charge for multiple ID codes:	<table><tbody><tr><td>2nd access code</td><td>\$10.00</td></tr><tr><td>nth access code</td><td>\$10.00 x (n-1)</td></tr></tbody></table>	2nd access code	\$10.00	nth access code	\$10.00 x (n-1)
2nd access code	\$10.00					
nth access code	\$10.00 x (n-1)					

* Charges may be changed upon 90-day notice. The above are U.S. charges.

** On a trial basis, 11:30 to 1:00 ET is also billed as non-prime. This is subject to change without advance notification.

*** Non-prime time was introduced to encourage spreading the workload.

1.7 ON-LINE SERVICES HOURS OF ACCESS

	<u>NLM</u>	<u>SUNY</u>
Monday	3 A.M. - 6 P.M.	8 A.M. - 9 P.M.
Tuesday	12 noon - 9 P.M.	3 A.M. - 6 P.M.
Wednesday	3 A.M. - 6 P.M.	8 A.M. - 9 P.M.
Thursday	3 A.M. - 6 P.M.	8 A.M. - 9 P.M.
Friday	3 A.M. - 9 P.M.	8 A.M. - 6 P.M.
Saturday	none	none
Sunday	none	none

On-line hours may be changed. NLM will provide as much advance notice as possible.

1.8 MEDLARS MANAGEMENT SERVICE DESK

Please remember that a Service Desk is provided in MEDLARS Management Section (MMS) to answer questions on logon/logoff procedures, communications, search strategies, off-line prints, offsearches, etc. Staff members are assigned to the Service Desk from 8:30 a.m. to 5:00 p.m. ET Monday through Friday. It is not necessary to ask for individual MMS staff members. The numbers of the Service Desk are (301) 496-6193 or toll-free (800) 638-8480. For urgent, computer-related problems encountered in the evening, on holidays, or other times when MEDLARS Management Section is not staffed, you may call the NLM Computer Room (301) 496-2734. If the staff in the Computer Room cannot immediately assist you, they will take a message and a description of the problem and forward it to MEDLARS Management Section the following work day.

PART 2 MINI-MANUAL

The NLM On-Line Services Mini-Manual has been prepared as a quick guide in searching NLM's on-line data bases. For ready reference use, the searcher may wish to separate the Mini-Manual from the rest of the manual. It is however, not a replacement for the NLM On-Line Services Reference Manual which offers a more complete description of on-line searching. The examples contained in this Mini-Manual are largely from the MEDLINE data base, but they are intended to illustrate general capabilities useful in searching all data bases. For systems information or assistance, please call or write:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

301/496-6193 or 800/638-8480

* * * * *

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MINI-MANUAL

2.1 INTRODUCTION

MEDLARS (Medical Literature Analysis and Retrieval System) became operational and was first used to produce Index Medicus in January 1964. A demand search service (a batch system) was also instituted using MEDLARS at NLM in 1964. In 1971, AIM-TWX (Abridged Index Medicus, accessible through the TWX communications network) was introduced. This experimental system provided the capability for participating institutions to achieve almost instantaneous access to references published in Abridged Index Medicus. In October 1971, MEDLINE (MEDLARS On-Line) became operational as an outgrowth of AIM-TWX. Currently, there are approximately 20 on-line data bases, including MEDLINE, available for on-line interactive searching.

2.2 DATA BASES

The following data bases are available to authorized users as of January 1, 1978:

NLM	SUNY
AVLINE	Audiovisuals
BACK66	BACK66
BACK69	BACK69
BACK72	BACK72
BACK75	BACK75
CANCERLIT	CHEMLINE
CANCERPROJ	MEDLINE
CATLINE	MESH VOCABULARY
CHEMLINE	SDILINE
CLINPROT	
EPILEPSY	
MEDLINE	
MESH VOCABULARY	
NAME AUTHORITY	
RTECS	
SDILINE	
SERLINE	
TOXBACK	
TOXLINE	

2.3 HOURS

As of January 1, 1978, on-line hours of service at NLM and SUNY are as follows:
(All times are Eastern Standard.)

	NLM	SUNY
MONDAY	3 AM - 6 PM	8 AM - 9 PM
TUESDAY	12 NOON - 9 PM	3 AM - 6 PM
WEDNESDAY	3 AM - 6 PM	8 AM - 9 PM
THURSDAY	3 AM - 6 PM	8 AM - 9 PM
FRIDAY	3 AM - 9 PM	8 AM - 6 PM
SATURDAY	NONE	NONE
SUNDAY	NONE	NONE

2.4 SAMPLE SEARCH INTERACTIONS

Following are sample interactions which illustrates various commands and program messages. The user can enter messages only after a USER: cue

INTERACTION

REFER TO MINI-MANUAL PART:

/LOGIN
PLEASE ENTER USERID OR LOGON
XYZ01

LOGIN (2.5)

THE CANCERLIT FILE HAS BEEN REGENERATED. SEE "NEWS".

BROADCAST (2.5.1) and
NEWS (2.7.1)

NLM TIME 9:30 DATE 77:321 LINE 071

PROG:

HELLO FROM ELHILL 3.
YOU ARE NOW CONNECTED TO THE MEDLINE FILE.
ARE YOU AN EXPERIENCED USER? (YES/NO)

INTRODUCTION (2.1)

USER:

Y=experienced
N=inexperienced

Y

PROG:

SS 1 /C?
USER:
MEAT OR MEAT-PACKING INDUSTRY OR FOOD ADDITIVES
PROG:
SS (1) PSTG (1806)

SEARCHING MESH HEADINGS
(2.11.2)
LOGICAL OPERATORS (2.19)

SS 2 /C?
USER:
BACON(TW) OR PIG(TW) OR ALL SWINE
PROG:
SS (2) PSTG (12212)

TEXT WORDS (2.11.8)
ALL (2.11.14)
LOGICAL OPERATORS (2.9)
ERROR CORRECTIONS (2.8)

SS 3 /C?
USER:
1 and 2
PROG:
SS (3) PSTG (315)

LOGICAL OPERATORS (2.9)

INTERACTIONREFER TO MINI-MANUAL PART

SS 4 /C?

TRUNCATION (2.11.13)

USER:

3 AND ALL NITRITE: OR 3 AND ALL NITRATE:

PROG:

SS (4) PSTG (19)

SS 5 /C?

LANGUAGE (2.11.20)

USER:

4 AND ENG(LA)

PROG:

TIME OVFLW: CONT? (Y/N)

TIME OVERFLOW MESSAGE
(2.15)

USER:

Y

PROG:

SS (5) PSTG (18)

SS 6 /C?

PRINTING (2.10)

USER:

"PRINT 1

PROG:

1

AU - HWANG LS

AU - ROSEN JS

TI - NITROSOPIRROLIDINE FORMATION IN FRIED BACON.

SO - J AGRIC FOOD CHEM 24(6):1152-4, NOV-DEC 76

Note: AU=author(s), TI=title of article, SO=source journal
title, vol., iss., pgs., date.

SS 6 /C?

AUTHOR SEARCHING (2.11)

USER:

KOVACH JS (AU)

PROG:

SS (6) PSTG (4)

SS 7 /C?

NEIGHBOR COMMAND (2.12)

USER:

"NEIGHBOR KOVACH (AU)

PROG:

POSTINGS TERM

3	KOVACEVIC S
7	KOVACEVIC Z
1	KOVACH A
20	KOVACH AG
2	KOVACH E

UP N OR DOWN N?

USER:

5

PROG:

INTERACTIONREFER TO MINI-MANUAL PART:

STINGS TERM
1 KOVACH IM
6 KOVACH JK
4 KOVACH JS
1 KOVACH JW
1 KOVACH PA
N OR DOWN N?

ER:

OG:

7 /C?

ER:

IR(TW) AND DYE(TW)

OG:

(7) PSTG (20)

8 /C?

ER:

(TI) :HAIR: AND :DYE:

OG:

(8) PSTG (17)

9 /C?

ER:

PIRIN/AE

OG:

(9) PSTG (483)

10 /C?

ER:

JBHEADINGS APPLY AE, PO

OG:

BHEADINGS ACCEPTED.

10 /C?

ER:

PIRIN

OG:

(10) PSTG (527)

11 /C?

ER:

JBHEADINGS CANCEL

OG:

BHEADINGS CANCELLED.

11 /C?

ER:

LIVER DISEASES

OG:

E OVFLW: CONT? (Y/N)

STRINGSEARCHING (2.11.10)

Note: An initial retrieval must be made before a stringsearch can be done.

SEARCHING MESH HEADINGS/SUB-HEADING (2.11.2)

SUBS APPLY COMMAND (2.11.6, 2.12)

EXPLODE (2.11.12)

INTERACTIONREFER TO MINI-MANUAL PART:

USER:
Y
PROG:
TIME OVFLW: CONT? (Y/N) TIME OVERFLOW MESSAGE (2.15)

USER:
Y
PROG:
SS (11) PSTG (19034)

SS 12 /C?
USER:
11 AND ADOLESCENCE
PROG:
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
SS (12) PSTG (2111)

SS 13 /C?
USER:
LIVER
PROG:
SS (13) PSTG (26241) SEARCHING MESH HEADINGS (2.11.2)

SS 14 /C?
USER:
"ELEMENTS ALL
PROG"
ALL ELEMENT RESTRICTIONS CANCELLED ELEMENTS ALL COMMAND (2.11.11)

SS 14 /C?
USER:
LIVER
PROG:
MM (LIVER) (2)
1 LIVER (MH)
2 LIVER (TW)
SPECIFY NUMBERS, ALL, OR, NONE- MULTI-MEANING MESSAGE (2.15)

USER:
ALL
PROG:
TIME OVFLW: CONT? (Y/N) TIME OVERFLOW MESSAGE (2.15)

USER:
Y
PROG:
SS (14) PSTG (33938)

INTERACTIONREFER TO MINI-MANUAL PART:

SS 15 /C?
USER:
"ELEMENTS DEFAULT
PROG:
DEFAULT ELEMENT RESTRICTIONS NOW APPLIED.

SS 15 /C?
USER:
J PSYCHOL (TA)
PROG:
SS (15) PSTG (175)

SS 16 /C?
USER:
"PRINT 1
PROG:

1
AU - TAMAYO A
AU - RAYMOND F
TI - SELF-CONCEPT OF PSYCHOPATHS.
SO - J PSYCHOL 97(FIRST HALF):71-7, SEP 77

SS 16 /C?
USER:
0002-9955 (IS)
PROG:
SS (16) PSTG (4154)

SS 17 /C?
USER:
16 AND FROM 770101 TO 770701
PROG:
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
SS (17) PSTG (710)

SS 18 /C?
USER:
16 AND 76(YP)
PROG:
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
TIME OVFLW: CONT? (Y/N)

JOURNAL TITLE
ABBREVIATION (2.11.15)

PRINTING (2.10)

INTERNATIONAL STANDARD
SERIAL NUMBER (2.11.16)

RANGING (2.11.18)

TIME OVERFLOW MESSAGE
(2.15)

YEAR OF PUBLICATION
(2.11.19)

TIME OVERFLOW MESSAGE
(2.15)

INTERACTIONREFER TO MINI-MANUAL PAR

USER:

Y

PROG:

SS (18) PSTG (1374)

SS 19 /C?

FILES COMMAND (2.12)

USER:

"FILES?

PROG:

YOU MAY ACCESS THE MEDLINE, SDILINE, CATLINE, MESH VOCABULARY, JOURNAL AUTHORITY, NAME AUTHORITY, OLD MESH VOCABULARY, AVLINE, CANCERLINE, CHEMLINE, TOXLINE, TRAFFIC, CANCERPROJ, EPILEPSY, CLINPROT, RTECS AND TOXICOLOGY DATA BANK FILE SETS.

YOU ARE NOW CONNECTED TO THE MEDLINE FILE.

SS 19 /C?

FILE COMMAND (2.12)

USER:

"FILE CATLINE

PROG:

YOU ARE NOW CONNECTED TO THE CATLINE FILE.

SS 1 /C?

INTERNATIONAL STANDARD
BOOK NUMBER (2.11.17)

USER:

12-024601-5 (BN)

PROG:

SS (1) PSTG (1)

SS 2 /C?

PRINTING (2.10)

USER:

"PRINT INDENTED, INCLUDE BN

PROG:

1

PERSONAL NAME

VOIGT, MELVIN JOHN//1911-/ED.

TITLE

ADVANCES IN LIBRARIANSHIP./N

IMPRINT

NEW YORK, LONDON,:ACADEMIC PRESS.

COLLATION

V.

CALL NUMBER

Z 671 A244:04NLM,01HMS

FIRST/LAST ISSUE

V. 1- 1970-

MAIN ENTRY TYPE

TITLE MAIN ENTRY

CITATION NUMBER

0241522

ISBN

12-024601-5

SS 2 /C?

LOGOFF (2.6)

USER:

"STOP

TIME 0:40:55 NLM TIME 10:11:06

USER.

PROG:

DONE? (YES/NO)

USER:
Y
PROG:

GOOD-BYE!

2.5 LOGIN

2.5.1 BROADCAST MESSAGES

Users logging into NLM or SUNY automatically receive short messages of current interest. These short notices appear only when it is necessary to inform users of very important and timely matters. Frequently they direct the user to the NEWS file for further information.

Following are instructions for logging in to the NLM and/or SUNY computer:

2.5.2 DIRECT DIAL

DIRECT DIAL (NLM ONLY)

<u>STEPS</u>	<u>SYSTEM PROMPT</u>	<u>USER RESPONSE</u>
1. Turn on terminal and coupler.		
2. Dial appropriate number. Couple the terminal to the telephone.		
3. Immediately login as no message will be received from the computer. Type /LOGIN followed by a carriage return.		/LOGIN (CR)
4. You will then be prompted for your ELHILL ID code.	PLEASE ENTER USERID OR LOGON XYZ01 (CR)	
5. NLM TIME etc.		

2.5.3 TYMN

TYMN

<u>TEPS</u>	<u>TYMN</u> <u>PROMPT</u>	<u>USER</u> <u>RESPONSE</u>	<u>NOTES</u>
1. Turn on the terminal and coupler.			

STEPSTYMNET
PROMPTUSER
RESPONSENOTES

2. Dial appropriate number.
Couple the terminal to
the telephone.

PLEASE TYPE
YOUR TERMINAL
IDENTIFIER

See below for
the list of
terminal ident-
ifiers.

3. TYMNET will ask you to
identify your terminal.
Type in the correct
terminal identifying
character without a
carriage return.

--1000-22---
PLEASE LOG IN:

NLM (CR)
or
SUNY (CR)
or
NLM2 (CR)

4. TYMNET will then respond
with a code and port
number and request that
you identify the computer
you wish to connect to.
Respond by typing either
NLM, NLM2, or SUNY
followed by a carriage
return.

Precede the com-
puter name by
typing a control
H for HALF Duplex
in ASCII. Do not
type a control H
for FULL Duplex.

5. TYMNET will then ask
for a password. Type
BCN followed by a
carriage return.

PASSWORD:

BCN (CR)

The password may
not print on the
terminal paper.

6. Wait until you receive
semicolon (;) after
which TYMNET will pause
for a moment and will
prompt with a message
to enter /LOGIN. Type
/LOGIN, followed by a
carriage return. You
will then be prompted
for your ELHILL ID code.

;
PLEASE ENTER
/LOGIN

/LOGIN (CR)

7. To disconnect, log off
as usual. You will then
receive the message
PLEASE LOG IN: You may
then log in to the same
or another computer or
you may hang up the phone.

PLEASE LOG IN:

TYMNET Terminal Identifiers

TERMINAL ID		TERMINAL ID	
ADDS		Loar Sigler	
580, 880, 980, 680	A	7700, ADM-1, ADM-2	A
Anderson Jacobson		Logobox	
330	CR	LX 180, LX 1010	I
830, 832	A	MI ²	I
630	E	2400	
Ann Arbor		Megadata	A
Design III, 200	A	Memorex	
Beehive		1240	G
Mini Bee 1, 2, 4	A	NCR	
Super Bee 2, 3	A	260	E
Car-Mel		796	A
I-211, R-211, M-501	A	Omron	
Computer Devices		8525	A
1030	E	Ontel	
Computek		4000	A
200, 300	A	Research	
Conrac		Teletary 3300, 3311, 3712	A
401, 480	A	Raytheon	
Control Data		PTS-100	A
713	A	Singer	
Computer Transceiver Execuport	E	30	E
DEC		Scientific Mgmt. Systems	
LA36, VT05, VT50, GT40	A	1440	A
Data Media		TEC, Inc.	
1500, 2000, 2500, 2100	A	400 Series, 1440	A
Datapoint		Tektronix	
3000, 3300, 1100	A	4012, 4013, 4014, 4023	A
Dataspeed 40/2		Teletype	
KD	A	33, 35	D
KDP	G	38	B
Delta Data		43	A
5000, 5100, 5200	A	Texas Instruments	
Digi Log		720, 725, 733, 735	E
209, 33, 300	A	743, 745	A
Gencom		Texas Scientific	
300	A	Entelikon 10	A
General Electric		Typegraph	
300, 1200	G	DP-30	C
Hazeltine		Tymshare Inc.	
1200, 2000	A	Models 100, 110, 125, 212, 213	E
Hewlett Packard		200	D
2615, 2616	A	310	C
Hydra		325, 311	A
Model B	I	315	E
IBM		Wang Laboratories	
2741	CR	220 OB	A
Interdata		Westinghouse	
Carousel 300	E	1600, 1620	A
Incoterm		Xerox	
SPD 10/20, 900, 20/20	A	BC100, BC200	A
Infoton Vista	A		
ITT			
3501 Asciscope	A		

2.5.4 TELENET

TELENET

<u>STEPS</u>	<u>TELENET PROMPT</u>	<u>USER RESPONSE</u>	<u>NOTES</u>
1. Turn on the terminal and coupler.			Selectric-based terminals switch to OFFLINE or LO
2. Dial appropriate number. Couple the terminal to the telephone line.			
3. Send two carriage returns. <u>1/</u>		(CR) (CR)	Step three identifies the speed and code at which your terminal is operating.
4. TELENET will identify itself and ask you to identify your terminal. Type in the four character ID for your terminal, followed by a carriage return.	TELENET 202 DL9		A list of Terminal Model Identifier is included. If does not contain an ID for your terminal just enter a carriage return
	TERMINAL=----(CR)		
5. If you are operating in HALF Duplex, you should now type in HALF. If you are operating in FULL Duplex, omit this step.	@	HHAALLFF (CR)	Telenet will repeat each character entered here.
6. Type a C for "connect", skip a space, and type the network address of the computer, followed by a carriage return.	@	C 301 20 (CR) or C 518 ML (CR)	To access NLM enter: C 301 20 (CR) To access SUNY enter: C 518 ML (CR)
7. TELENET will respond with a connection message. You are now ready to begin your conversation with the computer.	XXX XX CONNECTED		
8. Type /LOGIN followed by a carriage return and you will be prompted for your ELHILL ID code.		/LOGIN	
9. To disconnect, log off as usual. Hang up to disconnect from TELENET.	DISCONNECTED		

- 1/ Step three identifies the speed and code at which your terminal is operating.
 The appropriate speed/code detectors are:
- (a) ASCII terminals (CR) (CR)
 ASCII/APL application (CR)) (CR)
 - (b) Selectric-based terminals (first switch to REMOTE or COMM) (CR)
 Selectric/APL application (CR)

TELENET Terminal Identifiers

Enter the identification for your terminal model in response to network inquiry
 TERMINAL =

Terminal Model	Identifier
Anderson Jacobson 630	AJ63
Anderson Jacobson 841	†
Computer Devices CDI 1030	CD30
Computer Transceiver Execuport 300	CT30
Computer Transceiver Execuport 1200	CT12
Datapoint 2200	DP22
Datapoint 3000	DP30
Datapoint 3300	DP33
DECwriter	DECW
Data 100 73	DT73
General Electric TermiNet 30	TN30
General Electric TermiNet 120	TN12
General Electric TermiNet 300	GE30
General Electric TermiNet 1200	GE12
Hazeline 2000	HZ20
IBM 2740/2741 EBCD (with type:)	
963, 996, 998	IBM1
938, 939, 961, 962, 997	IBM2
942, 943	IBM3
947, 948	IBM4
IBM 2740/2741 Correspondence (with type:)	
001, 005, 007, 008, 012, 202, 030,	
050, 053, 067, 070, 085	IBM5
006, 010, 015, 019, 059, 090	IBM6
021, 025-029, 031-039, 060, 068,	
086, 123, 129-145, 156, 161	IBM7
043, 054	IBM8
IBM 3767	†
IBM 5100	†
Imiac PDS-1	IML1
Infoton Vista Standard	IFVS
Infoton Vistar Display	IFVD
Memorex MRX 1240	MX40
Research Inc. Teleray 3300	RI33
Tektronix 4010	TK10
Tektronix 4013	TK13
Tektronix 4023	TK23
Teletype Model 33	TT33
Teletype Model 35	TT35
Teletype Model 37	TT37
Teletype Model 38	TT38
Teletype Model 40	TT40
Teletype Inktronics	TTIN
Texas Instruments 725	TI25
Texas Instruments 733	TI33
Texas Instruments 735	TI35
Trendata 1000	†
Univac DCT 500	UV50
Video Systems 1200	VS12
Video Systems 5000	VS50
† same as IBM 2741	

2.6 LOGOFF ("STOP")

To disconnect from either the NLM or SUNY computer, type the command "STOP after any USER: cue and answer the Done? (Yes/No) message as shown in the following example:

SS 5 /C?
USER:
LIVER DISEASES
PROG:
SS (5) PSTG (3596)

SS 6 /C?
USER:
"STOP
TIME 0:04:08 NLM TIME 15:48:38
USER.

PROG:
DONE? (YES/NO)

USER:
Y
PROG:

GOOD-BYE!

2.7 /LOGIN VERSUS LOGON

/LOGIN

Routes the user to TCAM (Telecommunications Access Method Operating System) which in turn connects the user to the ELHILL data bases (MEDLINE, TOXLINE, CATLINE, CHEMLINE, etc.)

LOGON

Routes the user to TSO (Time Sharing Option Operating System) which connects user to TSO data sets (NEWS, PHONES, FILES) and MEDLEAR.

NEWS (general systems news)
PHONES (list of telephone access numbers)
FILES (number of records and dates covered in each data base)
MEDLEAR (computer-assisted instruction program on MEDLINE)

Examples:

/LOGIN

PLEASE ENTER USERID OR LOGON
#####

XYZ01

/LOGIN

PLEASE ENTER USER ID OR LOGON
#####

LOGON XYZ01

NLM TIME ##;##;## DATE ##:XXX LINE XXX

HELLO FROM ELHILL 3 ...

LOGON IN PROGRESS AT ...
DO YOU WANT NEWS, PHONES, FILES, OR

MEDLEARN?

ENTER YES OR NO: YES

WHICH DO YOU WANT?

ENTER NEWS, PHONES, FILES, OR
MEDLEARN: NEWS

A LOGON entry is used to access either NEWS, PHONES, FILES, or MEDLEARN.

2.7.1 NEWS

/LOGIN

PLEASE ENTER USERID OR LOGON

#####

LOGON XYZ01

LOGON IN PROGRESS AT 16:12:19 ON JANUARY 14, 1978

NO BROADCAST MESSAGES

DO YOU WANT NEWS, PHONES, FILES, OR MEDLEARN?

ENTER YES OR NO :YES

WHICH DO YOU WANT?

ENTER NEWS, FILES, PHONES, OR MEDLEARN:NEWS

'MMS.NEWS.DATA'

14 JAN MEDLINE AND SDILINE AT BOTH NLM AND SUNY CONTAIN JANUARY
CITATIONS. THE CANCERLINE FILE HAS BEEN UPDATED

2.7.2 PHONES

DO YOU WANT NEWS, PHONES, FILES, OR MEDLEARN?

ENTER YES OR NO :YES

WHICH DO YOU WANT?

ENTER NEWS, FILES, PHONES, OR MEDLEARN:PHONES

'MMS.PHONES.DATA'

PHONES

WITH 120 CPS LINES, V=VADIC 3405 MODEMS AND B=BELL 202C CR 202S
DATA SETS. UNLESS OTHERWISE NOTED, THE SPEED IS 110-300 BITS
PER SECONDS(BPS). 0*) DESIGNATES A NLM DIRECT DIAL NUMBER.

CITY	ST	TYMNET #	SPEED	TELENET #	SPEED	TYMNET FX #
ANCHORAGE	AK	907/276-4401	C			
BIRMINGHAM	AL	205/942-4141	C		205/254-8000	
PHOENIX	AZ	602/249-9261	C		602/257-1552	

2.7.3 FILES

DO YOU WANT NEWS, PHONES, FILES, OR MEDLEARN?

ENTER YES OR NO :YES

WHICH DO YOU WANT?

ENTER NEWS, FILES, PHONES, OR MEDLEARN:FILES

'MMS.FILES.DATA'

DATA BASE	TOTAL RECORDS	ENTRY DATES	COVERAGE/CURRENCY
*AVLINE	4,452	751104-771101	1900-1977
BACK66	545,463	651113-681111	JAN 66 - DEC 68
BACK69	649,346	681117-711117	JAN 69 - DEC 71

2.7.4 MEDLEARN

DO YOU WANT NEWS, PHONES, FILES, OR MEDLEARN?

ENTER YES OR NO :Y

WHICH DO YOU WANT?

ENTER NEWS, FILES, PHONES, OR MEDLEARN: MEDLEARN

: LOGON IN PROGRESS AT XX:XX:XX ON XXXXXXXXX XX, XXXX

NO BROADCAST MESSAGES

'LJE.MEDLEARN.NEWS'

ATTENTION TELNET USERS

USERS WHO ARE ACCESSING *MEDLEARN* VIA THE TELNET
NETWORK MUST ENTER TWO AT (@) SIGNS IN PLACE OF
ONE WHERE CALLED FOR IN THE PROGRAM.

THAT IS, WHEN *MEDLEARN* ASKS YOU TO INPUT AN @ SIGN,

TYPE: @@

AND STRIKE THE CARRIAGE RETURN KEY.

:HELLO FROM *MEDLEARN*

2.8 ERROR CORRECTIONS

Typing errors cannot be corrected after the carriage return key has been struck. To correct typing errors before the carriage return:

1) On teletype-compatible terminals, delete characters one at a time by typing a reverse slash (\), back arrow or underline character. Each stroke erases backward one space from the point where the correction began. After erasing back through the incorrect character, retype correctly. Entire lines may be deleted with the dollar sign (\$) and a carriage return. Resume typing after the USER: cue is received.

SINGLE CHARACTER

SS 1/C?

USER:

SWO\INE (user incorrectly typed SWINE and uses a reverse slash
 to "erase" the incorrect letter, O)

or

WHOLE LINE

SS 1/C?

USER:

EXPLODE LUNG DESEASES\$ (cr)

(user incorrectly typed the MESH Heading LUNG DISEASES and uses the dollar sign--\$- to "erase" the whole line and then re- inputs the whole line again correctly)

USER:

EXPLODE LUNG DISEASES

2) On 2741-type terminals, cancel characters one at a time with the backspace key and retype over message. Cancel an entire line with a dollar sign and carriage return.

2.9 LOGICAL OPERATORS

There are three logical operators AND, OR, and AND NOT which are used to combine search terms or search statement numbers. This can be illustrated with the search terms DOGS and CATS.

One can search for all citations in a data base indexed with either DOGS or CATS or both using the OR operator, for those with both DOGS and CATS in the same citations using the AND operator, and for those with DOGS but not CATS using the AND NOT operator.

2.9.1 OR

OR is used to retrieve records containing either or both search terms:

SS 1/C?

USER:

DOGS OR CATS

PROG:

SS (1) PSTG (33371)

Duplicate records are eliminated.

2.9.2 AND

AND is used to retrieve records containing both terms:

SS 2/C?

USER:

DOGS AND CATS

PROG

SS (2) PSTG (2275)

2.9.3 AND NOT

AND NOT is used to retrieve records containing DOGS and not CATS.

SS 3/C?

USER:

DOGS AND NOT CATS

PROG:

~ (3) PSTG (21449)

2.9.4 LOGICAL OPERATORS AND SEARCH STATEMENT NUMBERS

Instead of entering search terms, search statement numbers can be used with the logical operators. This avoids having to enter the same search terms more than once. For example, to search for items on military dentistry and medicine in Great Britain and France the searcher could enter the following search:

SS 4/C?
USER:
MILITARY DENTISTRY OR MILITARY MEDICINE
PROG:
SS (4) PSTG (1870)

SS 5/C?
USER:
GREAT BRITAIN(MH) OR FRANCE(MH)
PROG:
SS (5) PSTG (7495)

SS 6/C?
USER:
4 AND 5
PROG:
SS (6) PSTG (86)

Generally, one should plan a search so as to avoid entering the same terms more than once in each series, especially if the repeated term is one with a large number of postings, or is an EXPLOSION or a truncation.

2.9.5 LOGICAL OPERATOR PRECEDENCE

The AND logical operator takes precedence over the OR logical operator. Therefore, if the previous example had been input:

MILITARY DENTISTRY (MH) OR [MILITARY MEDICINE (MH) AND GREAT BRITAIN (MH)]
OR FRANCE (MH)

the retrieval would have been:

- 1) all records on MILITARY DENTISTRY
- 2) all records on MILITARY MEDICINE and GREAT BRITAIN
- 3) all records on FRANCE

This is not what was intended by the user. In effect, the computer places brackets around the terms connected by AND and searches on those terms first.

2.9.6 CONTINUING SEARCH STATEMENTS WITH LOGICAL OPERATORS

A search statement can be continued on additional lines by ending the line with either AND or OR. No line may begin with a logical operator. If it is necessary

to continue a line at the operator AND NOT, the AND should be placed at the end of the line and the next line should begin with NOT.

SS 1/C?

USER:

LIVER OR LIVER ABSCESS OR LIVER ABSCESS, AMEBIC OR LIVER CIRCULATION OR

PROG:

CNT 1

USER:

LIVER CIRRHOSIS OR LIVER CIRRHOSIS, EXPERIMENTAL

PROG:

2.9.7 LOGICAL OPERATORS IN MESH HEADINGS

When logical operators, such as AND, are contained in or "embedded" in a MESH Heading, they must be disguised for searching. The disguising can be done in one of two ways:

- 1) With a hash mark substituting for one of the letters in the word AND
BONE A#D BONES
- 2) By preceding the AND with a special character which may be a ! or @
BONE !AND BONES

2.10 PRINTING

2.10.1 THE "PRINT" COMMAND

The "PRINT" command may be used to display citations retrieved in previous search statements. If you enter a standard "PRINT" command the program will print the documents from the most recent search statement in standard format (AU, TI, SO), on-line, stopping every 25 lines to ask if you want to continue.

The most recent citations added to the data base are printed out first.

If you only want to see one or two sample citations, enter the number desired:

"PRINT 1

If you wish to omit earlier documents in a printout and begin the printing after a certain number of unit records, e.g. 12, you may use the SKIP parameter:

"PRINT SKIP 12

Note that "PRINT" commands as well as other commands do not use up a search statement.

2.10.2 PRINT FORMATS

Three print commands are standard across all data bases. These are PRINT, PRINT FULL, and PRINT DETAILED.

"PRINT = basic elements

"PRINT FULL = basic plus selected additional elements

"PRINT DETAILED = all printable elements

Following are examples from MEDLINE. Also included is a PRINT AR example which may be used with MEDLINE and related files. "PRT may be used instead of "PRINT.

2.10.2.1 "PRINT OR "PRT OR "PRINT STANDARD OR "PRT SD

USER:

"PRINT

PROG:

1

AU - PLADSON TR

AU - PARRISH RM

TI - HEPATORENAL SYNDROME. RECOVERY AFTER PERITONEOVENOUS SHUNT

SO - ARCH INTERN MED 137(9):1248-9, Sep 77

2

3

4

5

2.10.2.2. "PRINT FULL OR "PRT FU

USER:

"PRINT FULL

PROG:

1

AU - PLADSON TR

AU - PARRISH RM

TI - HEPATORENAL SYNDROME. RECOVERY AFTER PERITONEOVENOUS SHUNT

LA - ENG

MH - ADULT

MH - ASCITES/*THERAPY

MH - CASE REPORT

MH - *CATHETERIZATION

MH - HUMAN

MH - KIDNEY FAILURE, ACUTE/*THERAPY

MH - MALE

MH - PERITONEAL CAVITY

MH - VEINS

CI - 0003-9926 137:1248 77

SO - ARCH INTERN MED 137(9):1248-9, SEP 77

1

CALL NUMBER

VOLUME

Author

Title

.....

Please Check:

.....Fr.

.....So.

.....Jr.

.....Sr.

.....Gr.

.....Staff

Date

Print Name

Address

ANN ARBOR, MICHIGAN

2.10.2.3 "PRINT DETAILED OR "PRT DL

USER:

"PRINT DETAILED

PROG:

1

AU - PLADSON TR

AU - PARRISH RM

TI - HEPATORENAL SYNDROME. RECOVERY AFTER PERITONEOVENOUS SHUNT.

LA - ENG

Form 7580

MH - ADULT
MH - ASCITES/*THERAPY
MH - CASE REPORT
MH - *CATHETERIZATION
MH - HUMAN
MH - KIDNEY FAILURE, ACUTE/*THERAPY
MH - LIVER DISEASES/*THERAPY
MH - MALE
MH - PERITONEAL CAVITY
MH - VEINS
ED - 771014
PD - SEP 77
IS - 0003-9926
TA - ARCH INTERN MED
CN - 77265755
PG - 1248-9
SB - A
SB - M
PN - Z1.107.567.875
IP - 9
VI - 137
JC - 7FS
AS - AUTHOR
IM - 7712
AB - THE RENAL FAILURE IN THE HEPATORENAL SYNDROME IS UNUSUAL BECAUSE THE KIDNEYS ARE HISTOLOGICALLY NORMAL AND THE RENAL FAILURE MAY BE "FUNCTIONAL.: HEMODYNAMIC STUDIES INDICATE THAT INCREASED RENAL VASCULAR RESISTANCE AND DECREASED RENAL BLOOD FLOW MAY BE THE PRIMARY ABNORMALITIES LEADING TO RENAL FAILURE IN SOME CASES. THIS REPORT DESCRIBES A PATIENT WHOSE RENAL FAILURE RESOLVED AFTER PLACEMENT OF A PERITONEOVENOUS SHUNT. A MAJOR ADVANTAGE OF THIS DEVICE IS THAT IT CAN BE INSERTED WITH THE PATIENT UNDER LOCAL ANESTHESIA WITH MINIMAL SURGICAL RISK. FURTHER STUDIES ARE NEEDED TO DEFINE THE ROLE OF THE PERITONEOVENOUS SHUNT IN THE HEPATORENAL SYNDROME.
CI - 0003-9926 137:1248 77
SO - ARCH INTERN MED 137(9):1248-9, SEP 77

2.10.2.4 PRINT AR (Author, Title, Abstract, Source)

USER:

"PRINT AR

PROG:

AU - PLADSON TR
AU - PARRISH RM
TI - HEPATORENAL SYNDROME. RECOVERY AFTER PERITONEOVENOUS SHUNT.
AB - THE RENAL FAILURE IN THE HEPATORENAL SYNDROME IS UNUSUAL BECAUSE THE KIDNEYS ARE HISTOLOGICALLY NORMAL AND THE RENAL FAILURE MAY BE "FUNCTIONAL.: HEMODYNAMIC STUDIES INDICATE THAT INCREASED RENAL VASCULAR RESISTANCE AND DECREASED RENAL BLOOD FLOW MAY BE THE PRIMARY ABNORMALITIES LEADING TO RENAL FAILURE IN SOME CASES. THIS REPORT DESCRIBES A PATIENT WHOSE RENAL FAILURE RESOLVED AFTER PLACEMENT OF A PERITONEOVENDUS SHUNT. A MAJOR ADVANTAGE OF THIS DEVICE IS THAT IT CAN BE INSERTED WITH THE PATIENT UNDER

LOCAL ANESTHESIA WITH MINIMAL SURGICAL RISK. FURTHER STUDIES ARE NEEDED TO DEFINE THE ROLE OF THE PERITONEOVENOUS SHUNT IN THE HEPATORENAL SYNDROME.

SO - ARCH INTERN MED 137(9):1248-9, SEP 77

2.10.3 PRINTING SEARCH STATEMENT NUMBERS

You may specify the search statement(s) from which you wish on-line or off-line printing. To do so, enter SS (or SSN) followed by the search statement number you want. For more than one search statement, repeat the keyword SS:

"PRINT SS 1

"PRINT SS 2, SS 4, SS 5, FULL, OFF-LINE

2.10.4 PRINTING ELEMENTS

The print command may be modified to include or exclude unit record elements by specifying the element. You may specify the categories you wish printed in any of several ways. You may request print from only certain categories by specifying them in the print command (that is, you may use the element abbreviations to restrict the printing of those elements only):

"PRINT TI, AU

"PRINT 3, AU, TI, YP

Or, you may add elements to an existing format set with the word INCLUDE:

"PRINT FULL, INCLUDE AB

If, you may omit elements by using the word EXCLUDE:

"PRINT DL OFF-LINE, EXCLUDE MH

2.10.5 COMPACT AND INDENTED PRINTING

There are two alternative page layouts available for on-line and off-line printing: Compact and Indented.

Compact presents each category of information prefixed by its 2-letter mnemonic designator or abbreviation. It is the most time-saving (on-line) and space-saving, but the mnemonics may not be clear to someone unfamiliar with the data base.

For example:

SS 3/C?

USER:

"PRINT

1

AU - MACDONALD CM

AU - DOW J

AU - MOORE MR
TI - A POSSIBLE PROTECTIVE ROLE FOR SULPHYDRYL COMPOUNDS IN ACUTE
ALCOHOLIC LIVER INJURY.
SO - BIOCHEM PHARMACOL 26(16):1529-31, 15 AUG 77

Indented format indents the citation information to column 26 on the page, and precedes each category with its full name. Indented format is useful for off-line prints; and you may find it very helpful to print one or two documents DETAILED INDENTED on-line to familiarize yourself with a new data base.

For example:

SS 3/C?

USER:

"PRINT INDENTED

1

AUTHOR

MACDONALD CM

AUTHOR

DOW J

AUTHOR

MOORE MR

TITLE

A POSSIBLE PROTECTIVE ROLE FOR SULPHYDRYL
COMPOUNDS IN ACUTE ALCOHOLIC LIVER INJURY.

SOURCE

BIOCHEM PHARMACOL 26(16):1529-31, 15 AUG 77

2.10.6 OFF-LINE PRINTING

Citations may be printed at the terminal while the user is connected to the computer or printed off-line in which case the user has instructed the computer to print the citations at a later time.

Off-line print instructions are entered at the terminal, but the printing itself is done on a high-speed printer at NLM or SUNY. The printout is then mailed to the user the following morning. For example:

SS 2 /C?

USER:

"PRINT OFF-LINE

PROG:

NAME?

USER:

JANE DOE

PROG:

ADDRESS?

USER:

111 ANY STREET

PROG:

CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-

USER:

ANYWHERE, STATE 11966

PROG:

REQUESTER'S NAME, OR SAME-

USER:
SAME
PROG:
SEARCH TITLE, OR NONE-

USER:
LIVER DISEASES
PROG:
OK? (Y/N/C)

USER:
Y
PROG:
OFF-LINE-PRINT COMPLETED.

An off-line print is limited to 300 citations.

2.11 SEARCHING

In MEDLINE and related files, MeSH vocabulary and free-text searching are available. In the TOXLINE and CANCERLINE files and EPILEPSYLINE free-text searching is the major mode of searching.

2.11.1 MESH

NLM's controlled vocabulary, MeSH (Medical Subject Headings), is a vital part of the library's computer-based Medical Literature Analysis and Retrieval System (MEDLARS). MeSH contains the list of index terms or descriptors used by NLM to index articles to be included in MEDLINE and related files.

Citations to the periodical literature of medicine are published in the monthly Index Medicus under appropriate MeSH terms. Books and documents are cataloged by subject, using MeSH terms, and are listed under these terms in the NLM publication, Current Catalog, as well as in the CATLINE on-line data base. By coordination of MeSH terms, citations may be retrieved from the computer to satisfy the individual needs of scientists, practitioners, educators, etc.

A brief sample from the Annotated Medical Subject Headings shows the MeSH subject headings arranged alphabetically.

CAPILLARITY
H1.181.529.875.327
NIM; no qualif

CAPILLARY FRAGILITY
E1.145.347 G9.330.277
70(68); only /drug eff /rad eff
X CAPILLARY RESISTANCE, HEMATOLOGIC
XR BLOOD COAGULATION TESTS

CAPILLARY PERMEABILITY
G6.553.166.310.202 G9.330.377
only /drug eff /rad eff; 'vascular permeability' goes here
X PERMEABILITY, CAPILLARY

CAPILLARY RESISTANCE
G9.330.612.931.327
only /drug eff /rad eff

CAPILLARY RESISTANCE, HEMATOLOGIC see CAPILLARY FRAGILITY
E1.145.347 G9.330.277

CAPROLACTAM
D2.65.589.200 D3.383.66.150
D3.383.411.200
75; do not use /biosyn /defic /physiol; /analogs NIM only
see under AZEPINES
X AMINOCAPROIC LACTAM

CAPROMYCIN see CAPREOMYCIN
D20.85.89.148 D20.338.135.139

CAPRYLATES
D2.241.81.222 D2.241.81.407.177
D10.516.251.122
do not use /analogs /biosyn /defic /physiol
X OCTANOATES
XU OCTANOIC ACIDS

CAPSAICIN
D2.241.81.436.180 D10.516.251.355.190
75; do not use /defic /physiol; /analogs NIM only
see under FATTY ACIDS, UNSATURATED

2.11.2 SEARCHING MESH HEADINGS

In searching MeSH headings, the headings must be input exactly as they appear in the controlled vocabulary. For example, to search psychological stress, the searcher must use STRESS, PSYCHOLOGICAL.

One may look in either the printed MeSH or use the "NEIGHBOR command on-line to check the exact format/spelling of MeSH headings. See the "NEIGHBOR command for details.

2.11.3 MAJOR POINT OF THE ARTICLE (CENTRAL CONCEPT INDICATOR)

To retrieve citations where the concept desired is the major point of the article, precede the MeSH Heading with an asterisk(*). For example:

SS 2 /C?

USER:

*LIVER DISEASES

2.11.4 SUBHEADINGS

Subheadings add specificity to MeSH headings. For example, an article on the adverse effects of aspirin would be indexed as ASPIRIN/adverse effects rather than simply ASPIRIN. There are currently 75 subheadings used in indexing, cataloging, and searching. An alphabetical list of subheadings with their search abbreviations and allowable categories follows.

Subheadings are searched by entering the MeSH heading followed by a slash and then the two letter abbreviation of the subheading desired. If more than one subheading is to be applied to a MeSH heading, the "SUBS APPLY command should be used.

2.11.5 SEARCHING MESH HEADINGS/SUBHEADINGS

Enter the MeSH heading followed by a slash and the two letter abbreviation for the subheading:

SS 2 /C?

USER:

ASPIRIN/AE

(for the adverse effects of aspirin)

PROG:

SS (2) PSTG (473)

2.11.6 "SUBS APPLY COMMAND

Use the "SUBS APPLY command to apply more than one subheading to a MeSH heading.

SS 3 /C?

USER:

"SUBS APPLY AE, PO

PROG:
SUBHEADINGS ACCEPTED.

SS 3 /C?
USER:

(for the adverse effects and
poisoning effects of aspirin)

ASPIRIN

PROG:
SS (3) PSTG (517)

SS 4 /C?
USER:

"SUBS CANCEL

Be sure to enter "SUBS CANCEL
command to remove subheadings.
after searching the desired
MeSH heading(s).

PROG:
SUBHEADINGS CANCELLED.

2.11.7 ALPHABETIC LIST OF SUBHEADINGS WITH ABBREVIATIONS AND ALLOWABLE CATEGORIES

The following is an alphabetic list of the subheadings used in indexing with their search abbreviations and the categories or subcategories with which they may be used.

<u>Subheadings</u>	<u>Search Abbreviation</u>	<u>Allowable Categories</u>
Abnormalities	AB	A(except A10,A11,A12,A16)
Administration & Dosage	AD	D
Adverse Effects	AE	D,E,F4,H1,J
Analogs & Derivatives	AA	D(except D8)
Analysis	AN	A,B(except B2),C4,D,G3,J
Anatomy & Histology	AH	A,B1,B2,B5,B6
Antagonists & Inhibitors	AI	D
Biosynthesis	BI	D
Blood	BL	B2,C,D,F3
Blood Supply	BS	A(except A7,A11,A12),C4
Cerebrospinal Fluid	CF	B2,C,D,F3
Chemical Synthesis	CS	D
Chemically Induced	CI	C,F3
Classification	CL	All categories except A & Z
Complications	CO	C,F3
Congenital	CN	C(except C16)
Cytology	CY	A,B
Deficiency	DF	D
Diagnosis	DI	C,F3
Diagnostic Use	DU	D,H
Diet Therapy	DH	C,F3
Drug Effects	DE	A,B,F1,F2,G4 thru G11
Drug Therapy	DT	C,F3
Economics	EC	C,E,F3,N2,N3,N4
Education	ED	E,F,G1,G2,G3,H thru M,N1,N2
Embryology	EM	A(except A11,A12,A16),B1,B2,B6,C
Enzymology	EN	A,B(except B2),C,F3
Ethnology	EH	Z

<u>Subheadings</u>	<u>Search Abbreviation</u>	<u>Allowable Categories</u>
Etiology	ET	C,F3
Familial & Genetic	FG	C,F3
Genetics	GE	B,D6,D8 thru D13,D24
Growth & Development	GD	A(except A10,A11,A12,A16),B
History	HI	C thru F,G1,G2,G3,H thru N
Immunology	IM	A,B,C,D,F3
Injuries	IN	A(except A10,A11,A12,A16)
Innervation	IR	A(except A8,A10,A11,A12)
Instrumentation	IS	E,F2,F4,G1,G2,G3,H,J,L
Isolation & Purification	IP	B1,B3,B4,B5,D
Legislation & Jurisprudence	LJ	I1,I2,N2,N3,N4
Manpower	MA	E6,F4,G1,G2,H,I,J,L,N2,N3,N4
Metabolism	ME	A,B,C,D,F3
Methods	MT	E,F4,G1,G2,G3,H,I,J,L,N
Microbiology	MI	A,B1,B2,B6,C,F3
Mortality	MO	C,E,F3,F4
Nursing	NU	C,E,F3
Occurrence	OC	C,F3
Organization & Administration	OG	N2,N3,N4
Parasitology	PS	A,B1,B2,B6,C,F3
Pathogenicity	PY	B1,B3,B4,B5
Pathology	PA	A,C,F3
Pharmacodynamics	PD	D
Physiology	PH	A,B,D,F1,F2
Physiopathology	PP	A,C,F3
Poisoning	PO	D,J
Prevention & Control	PC	C,F1,F3,G3,I1
Psychology	PX	C,F3,E(except E7)
Radiation Effects	RE	A,B,D,F1,F2,G4 thru G12,J
Radiography	RA	A,C
Radionuclide Imaging	RI	A,C
Radiotherapy	RT	C
Rehabilitation	RH	C,F3
Secretion	SE	A,C4,D
Standards	ST	D,E,F4,G1,G2,G3,H,I,J,L,N
Supply & Distribution	SD	D,E,F4,H,I,J,L,N2,N3,N4
Surgery	SU	A,B2,C,F3
Therapeutic Use	TU	D,H
Therapy	TH	C,F3
Toxicity	TO	D,J
Transmission	TM	C
Transplantation	TR	A
Trends	TD	F4,G1,G2,G3,I,N
Ultrastructure	UL	A(except A12),B,C4
Urine	UR	B2,C,D,F3
Utilization	UT	E,G1,G2,G3,H,I,J,L,N
Veterinary	VE	C(except C22),E

2.11.8 TEXT WORDS (FREE TEXT SEARCHING)

Text Words are words taken from various data elements or categories in each data base. Text Words are single terms and not phrases as are many MeSH headings. Text Words are created by the program examining each record as it is input to the system. The program selects candidate text word terms by a set of rules and rejects terms found on the stopword list and which do not meet certain rules.

As an example, the following MEDLINE abstract will provide the listed Text Words:

AB - Marked polydipsia and polyuria developed in a 1 1/2-year-old male Abyssinian cat. Diabetes insipidus was suspected, inasmuch as intramuscular vasopressin administration resulted in amelioration of polydipsia and polyuria. However, hypertonic (3%) saline solution given intravenously resulted in anuria, an indication of antidiuretic hormone activity.

Text Words: marked, polydipsia, polyuria, developed, year, old, male, Abyssinian, cat, diabetes, insipidus, suspected, inasmuch, intramuscular, vasopressin, administration, resulted, amelioration, hypertonic, saline, solution, intravenously, anuria, indication, antidiuretic, hormone, activity.

Note that a particular text word is selected only once, although it may appear in the abstract several times.

Several factors must be considered when searching free-text terms:

- 1) Variant spellings: Words may be spelled differently depending upon the country of publication of the item. For example, tumor and tumour, sulfur and sulphur, fetus and foetus, etc. The "NEIGHBOR command is useful in locating variant spellings and the truncation symbol can be used to retrieve several spellings simultaneously.
- 2) Variant word forms, prefixes and suffixes: The "NEIGHBOR command is extremely valuable in finding variations on a given root word. Use the instruction ALL preceding the truncated term in order to eliminate a multi-meaning message and to search all of the variant word forms.
- 3) Misspellings: Text words may be misspelled, either in the article itself, or in the process of being input to the data base. The "NEIGHBOR command is also extremely useful in finding such misspellings.
- 4) Synonyms: In text word searching the searcher will retrieve only on words actually included in the text word field. Therefore, it is important to use as many synonyms as possible in the text word searching.

2.11.9 AUTHOR SEARCHING

In MEDLINE, authors are generally searched by entering the author's last name and two initials followed by the qualifier (AU). Sometimes only one initial is used with the author's name. If you are not sure of the correct input form, use the "NEIGHBOR command to check the way the author's name has been entered into the system or use the term truncation symbol to retrieve all authors with the same last name and beginning initial. For example, entering SMITH J: (AU) will cause the system to retrieve: SMITH JA, SMITH JB, SMITH JC, SMITH JD, etc. For author

searching in other data bases, please refer to the On-Line Services Reference Manual.

2.11.10 STRINGSEARCHING

Although most of the important data elements in the unit record are directly searchable as search terms, it is also possible to search for the presence of a character string in a citation using stringsearch. Stringsearching involves examining each unit record one at a time for the presence of the specified character string, and is therefore much slower than direct searching for terms. A stringsearch cannot be executed on the whole file; it is necessary to carry out a preliminary search to retrieve a subset of the data base and then to perform a stringsearch of these citations. The stringsearch operation is "time sliced" by the program. The records are scanned in sequence from the oldest to the most recent and as each time slice expires the user is asked if he wishes to continue:

(350) SEARCHED AND (5) QUALIFIED. CONTINUE? (YES/NO)
USER:

A string search is entered as a search statement, as shown in the example:

PROG:

SS 2 /C?
USER:

TS 1 (TI) :HAIR: AND :DYE:

Note that more than one element of a citation can be stringsearched:

SS 2 /C?
USER:

TS 1 (AU) :SMITH : AND :JONES : AND :HAIR: (AB)

2.11.11 "ELEMENTS ALL

Each data base has a set of data elements to which the system defaults or uses during a search in the absence of other instructions. By using the "ELEMENTS ALL command, you can instruct the system to retrieve on the search term entered regardless of where it appears in the citation.

For example, if the search term LIVER is entered by itself, the postings returned will be for LIVER as a MeSH heading--or 26,241 citations. However, if an "ELEMENTS ALL command is entered and then the term LIVER is input to be searched, 33,938 citations retrieved will include the use of LIVER as both a MeSH heading and those which have the text word LIVER in the title or abstract.

To return to the system default for the data base, issue a "ELEMENTS DEFAULT command.

2.11.12 EXPLODE

The exploded search action is a search action, not a command, and therefore quote marks are not used. MeSH Classification Numbers or MeSH headings may be exploded. One can obtain the MeSH number for a MeSH heading by issuing a MESHNO command

thus:

"MESHNO (followed by a MeSH heading)

The exploded term is treated as just another search term in a search statement.

2.11.13 TRUNCATION

Search terms may be entered in truncated form with the use of the colon (:) as a substitute for any number of characters or spaces.

ALL PROPAN:

will retrieve the terms PROPANE, PROPANES, PROPANEDIOL, etc.

ALL DIMETHYL:SUL:OXIDE

will retrieve the terms DIMETHYL SULFOXIDE, DIMETHYL SULPHOXIDE, DIMETHYLSULFOXIDE, and DIMETHYLSULPHOXIDE.

The colon placed in the middle of a term substitutes for no characters as well as any number of characters. The colon is thus very useful in cases of variant spellings. Use of the truncation symbol may generate a Multi-Meaning Message, because the truncation usually retrieves more than one term from several elements.

2.11.14 ALL

Preceding a search term with the word ALL will cause the program to gather postings for the term from all searchable elements. It is especially useful when the truncated form of a search term is entered because then the program will bypass the Multi-Meaning message, and will cause the program to logically OR together all versions of the truncated term.

ALL FISH:

will retrieve MeSH headings and text words beginning with FISH, and also any authors named FISHMAN, FISHBEIN, etc.

Specifying the fields to be searched will eliminate this program:

ALL FISH: (TW), (MH) ?

(This will retrieve text words only, beginning with FISH, i.e., fish, fishes, fisherman, etc.)

2.11.15 JOURNAL TITLE ABBREVIATION

Journals may be searched separately or in combination in most of the data bases. The qualifier which must follow the entry is (TA). The "NEIGHBOR command can be most helpful in identifying the correct format of entry.

USER:

2.11.16 INTERNATIONAL STANDARD SERIAL NUMBER (ISSN)

The ISSN for the journal in which the article appears is directly searchable. The element is always an eight-digit number in the form: #####-####. The ISSN can be used to locate all the articles in the data base from one journal or to restrict the search to one journal. For example, in the sample search, the ISSN for the Journal of the American Medical Association, 0002-9955, was input with the qualifier (IS).

2.11.17 INTERNATIONAL STANDARD BOOK NUMBER (ISBN)

The ISBN is especially useful in the CATLINE file for searching. The element is always a thirteen-digit character string including numerals and hyphens. The entry should always be qualified with (BN).

In the search example, 12-024601-5 (BN) was entered, retrieving 1 posting. This citation was then printed, the title being: Advances in Librarianship.

2.11.18 RANGING

This is a search strategy which can be used with some numeric data elements that are directly searchable. No non-numeric data element can be searched using this method. There are three ranging expressions; the appropriate data elements are inserted in the blanks of the appropriate expression:

LESS THAN _____

FROM _____ TO _____

GREATER THAN _____

These expressions should be entered as part of a search statement, in combination with other terms. Used by themselves they would result in many overflow messages. The numbers are inclusive for the FROM _____ TO _____ statement. The only element or field in MEDLINE which is used in ranging is the Entry Date (ED) element; however, the (ED) qualifier does not need to be entered because the program will automatically search only that element. In the sample search, the retrieval obtained in search statement 16 is combined with the date range of January 1, 1977 through July 1, 1977. The only acceptable entry form for entry date searching is YYMMDD.

2.11.19 YEAR OF PUBLICATION

Searching may be restricted to certain years of publication. The correct form of input is the last two digits of the year(s) desired, along with the qualifier (YP). Year of publication should only be entered as part of a search statement, in combination with other terms, as otherwise many time overflow messages result. In the search example, retrieval from search statement 16 was combined with a year of publication of 1976, e.g., entered as 76(YP).

2.11.20 LANGUAGE

Searching may also be done on languages. Again, this should only be entered as part of a search statement, in combination with other terms. The correct form of input is the three-character abbreviation for the language followed by the qualifier (LA). In the sample search, the postings retrieved in search statement 4 were combined with ENG(LA) to retrieve only those written in the English language.

2.12 COMMANDS

Commands are instructions to the computer to perform operations other than searching. Commands are distinguished from search terms by preceding them with quote marks ("").

The following is an alphabetical list of ELHILL commands followed by abbreviation(s) where available and brief descriptions:

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"CAPS	None	Allows a user with an upper/lower case printing terminal to print on-line in upper case only.
"COMMENT	None	Allows user to submit messages on-line to MEDLARS Management Section at NLM.
"DIAGRAM	"DIAG	Provides user with a descriptive print-out of the logical structure of either all completed search statements or a specified search or STORESEARCH
"ELEMENTS	None	Allows user to specify which data elements are to be searched for a given search term.
"ERASEALL	"ERSLL	Erases all completed search statements and returns user to SS 1 /C?
"ERASEBACK	"ERASEBAK or "ERSBK "BACKUP	Erases either the last completed search or cancels all search statements back to the search statement number designated in the command.
"EXPLAIN	"EX or "?"	Explains the last program message received by the user or any command, program message, or operating procedure specified in the command.
"FILE	None	Allows user to end interaction with one data base and change over to another.
"FILES	None	Allows user to see all available data base names.

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"FIND	"FD	Allows user to enter a search statement in the form of a command in order to by-pass other program dialog.
"FINISHED	None	Indicates the end of OFFSEARCH or STORESEARCH formulation.
"HELP	None	Provides assistance to the user for a variety of problems encountered in searching or responding to the program.
"KEEP (see "RESTACK)		
"MESHNO	"MNO	Displays the MeSH classification number for an entered term.
"NEIGHBOR	"NBR	Displays search terms that are alphabetically adjacent to the entered term and the number of postings for each term in the Index of the Retrieval File Set.
"NEIGHBORDET	"NBRDET	When used with a main heading, it lists each form of the heading: alone, with an asterisk, with each subheading, and with each subheading and an asterisk.
"NEWS	None	Allows user to access the general news file while connected to ELHILL.
"OFFSEARCH	None	Initiates the OFFSEARCH process.
"PRINT	"PRT	Displays results of a search. User may specify categories of information from the unit record or various other standard or tailored options.
"PURGESEARCH	None	Removes a STOREdSEARCH.
"RENAME	"RNM	Allows user to change the name of any command, command abbreviation, logical operator, or element in the "VERSION and "PRINT commands.
"RESTACK	"RSTK "KEEP	Allows user to save and delete completed search statements selectively.
"RESTART	"RST	Erases all search statements and any special instructions given to the program (i.e., "RENAME or "VERSION commands) and returns user to the program greeting.
"STOP	None	Signals the program to disconnect the user from the computer.

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"STORESEARCH	None	Initiates the STORESEARCH process.
"SUBHEADINGS APPLY	"SUBS APPLY	Allows user to automatically apply a subheading or subheadings to all main headings in following search statements
"TIME	None	Displays the cumulative search or connect time and the system connected to along with the current Eastern Standard time of day.
"TREE	None	Displays the hierarchical position of a MeSH heading in the Tree structures and gives the MeSH classification number for each term in the display.
"USERS	None	Displays the number of on-line users interacting with the program at the time the command is entered.
"VERSION	"VERS	Allows user to change the length of on or more program messages.

2.13 "OFFSEARCH SAMPLE

SS 1 /C?

USER:

"OFFSEARCH

-user enters "OFFSEARCH command

PROG:

TASKNAME = S8104427 -program assigns task number

ON-LINE OUTPUT:--NPS/PSTG/NONE?

-program asks user to specify whether they want to see no postings, postings, or none messages for terms from the on-line file to which they are presently connected

USER:

PSTG

PROG:

FILES?

-program asks user to specify files to be searched after on-line files have been brought down for the evening

USER:

BACK75, BACK72

-user specifies files

PROG:

PRINTSPECS?

-program asks user the format for the printed citations which will be mailed to the user

USER:

SD

PROG:

PRINT ELEMENTS, IF ANY, WILL BE EVALUATED AGAINST THE BACK75 FILE.

OK? (Y/N/C)

-program alerts user to fact that the data bases must be similar--MEDLINE, SDILINE, and the BACKfiles are similar; or TOXLINE and TOXBACK are similar

USER:

Y

PROG:

ENTER SEARCH-

-user enters Y to proceed, N to return to On-Line Output query above, or C to cancel the OFFSEARCH
 -program asks user to begin search, placing '*'s around the search statement numbers

STS SS 1/C?

USER:

*EPILEPSY/VE

PROG:

SS (1) PSTG (10)

-user inputs search strategy

STS SS 2/C?

USER:

1 AND DOG DDISEASE

PROG:

NP (DOG DDISEASE)

SS (2) PSTG (0)

-user misspells a MESH heading

STS SS 3/C?

USER:

"BACKUP

PROG:

-user inputs "BACKUP command to "erase" previous search statement so that computer will not have to perform extra work

STS SS 2/C?

USER:

1 AND DOG DISEASES

PROG:

SS (2) PSTG (6)

-user reinputs correct strategy

STS SS 3/C?

USER:

1 AND CAT DISEASES

PROG:

SS (3) PSTG (1)

-user continues the searching

STS SS 4/C?

USER:

"FINISHED

PROG:

SSNOS-OVRIDES?

-user enters "FINISHED to complete OFFSEARCH

USER:

2, 3

PROG:

-user enters search statement numbers from which he wants printouts

SEARCH TITLE, OR NONE-

USER:

ANIMAL EPILEPSY

-user gives a title

PROG:

NAME?

USER:

JANE DOE

PROG:

ADDRESS?

-user enters NAME, ADDRESS, CITY, etc. information so that the printouts can be sent

USER:

8600 ROCKVILLE PIKE

PROG:

CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-

USER:
ROCKVILLE, MARYLAND 20014

PROG:
OFFSEARCH COMPLETED.

SS 4/C?
USER:

2.13.1 OFFSEARCH FUNCTIONS

OFFSEARCH is designed to serve the following functions:

- 1) Perform the same search against several data bases, including the one to which the user is connected when entering the search, if desired.
- 2) Perform a search against files not available on-line, such as the BACKfiles of MEDLINE or TOXBACK.
- 3) Save time and money for the user by performing searches and printing out the results in batch mode instead of the more expensive interactive mode.
- 4) Execution of stored searches.

2.13.2 OFFSEARCH LIMITATIONS

OFFSEARCHES have the following limitations: they may contain only 25 search statements, only 380 terms may be used (keyboard terms), only 1800 terms may be generated (through explosions and truncations, etc.), only 500 citations per search statement per file may be printed, only 180 seconds of processing time may be used by a given task, and no more than 3000 records may be STRINGSEARCHed in one search statement.

2.13.3 OFFSEARCH COMMANDS

All commands and functions available in interactive searching are available in OFFSEARCH except the "RESTACK and "PRINT OFF-LINE commands. Three commands used only in "OFFSEARCH are:

- 1) "OFFSEARCH - this command initiates the OFFSEARCH.
- 2) "OFFSEARCH CANCEL - this command ends the OFFSEARCH and returns the user to interactive searching; no search will result from a cancelled OFFSEARCH; the command may be entered after any USER: cue.
- 3) "FINISHED - this command is used to indicate that the user has ended the search and is ready to provide name and address information for mailing.

2.14 "STORESEARCH SAMPLE

SS 4/C?

USER:

"STORESEARCH

PROG:

SEARCHNAME?

-user enters "STORESEARCH mode

-program asks user to assign a search name

USER:
DRUG EFFECTS
PROG:
ON-LINE OUTPUT:--NPS/PSTG/NONE?

-program asks whether the user would like to see, from the on-line file to which they are presently connected, no postings, postings, or none

USER:
PSTG
PROG:
ENTER SEARCH-

STS SS 1/C?

USER:
ASPIRIN/AE OR ANTITUSSIVE AGENTS/AE - user inputs search
PROG:
SS (1) PSTG (494)

STS SS 2/C?

USER:
CHILD OR CHILD, PRESCHOOL
PROG:
TIME OVFLW: CONT? (Y/N)

USER:
Y
PROG:
SS (2) PSTG (71904)

STS SS 3/C?

USER:
1 AND 2
PROG:
SS (3) PSTG (39) -only the last search statement will cause a printout, individual search statements from a stored search cannot be printed

STS SS 4/C?

USER:
"FINISHED
PROG:
OK? (Y/N/C) -user inputs "FINISHED to complete the stored search

USER:
Y -user enters Y for YES, N for NO, or C for CANCEL
PROG:
STORESEARCH COMPLETED.

SS 4/C?
USER:

2.14.1 STORESEARCH FUNCTIONS

- 1) perform the same search repeatedly at intervals as an SDI-type service
- 2) perform a search against various data bases
- 3) store large groups of related concepts as a "hedge" to be used repeatedly in other searches

Stored searches cannot be executed on-line; they must be used through "OFFSEARCH. However, STORESEARCH saves the user the time it would have taken to key in the entire search each time that the same search needs to be performed.

2.14.2 STORESEARCH LIMITATIONS

The searches stored by a user are accessed by their names. For this reason, there are several rules governing the naming of stored searches:

- 1) Only one search may be stored under a given name. A second search stored under the same name as an already existing search prevents access to EITHER search. However, the user still must pay for storage of both.
- 2) Names cannot be purely numeric, i.e., 75648.
- 3) Names cannot contain logical operators or special characters. For example, a search named KIDNEY AND LIVER will not be accessible, but storage will be charged to the user. Special characters include the greater and less than symbols, left and right parentheses, plus sign, dollar sign, semi-colon, dash, hyphen, comma, percent sign, apostrophe, equals sign, pound sign, colon, backward slash, asterisk, period, ampersand, or any other characters other than "regular" alphabetics, spaces, and the numbers 0-9.
- 4) Names cannot exceed 30 characters in length.

2.14.3 STORESEARCH COMMANDS

- 1) "STORESEARCH - this command initiates the STORESEARCH
- 2) "FINISHED - this command informs the computer that the entire search has been entered
- 3) "DIAGRAM searchname - used to see the stored search formulation
- 4) "PURGESEARCH searchname - this command will cause the system to remove the search stored under this name from the computer file
- 5) "STORESEARCH CANCEL - this command is used during the actual storing of the search and will negate the "STORESEARCH command; it may be entered after any USER: cue.

2.14.4 STORESEARCH EXECUTION

A stored search is available for use only through "OFFSEARCH. It cannot be used on-line. A search may be stored either on the SUNY or the NLM computer, but it can only be executed at the same computer at which it is stored. To execute, the user enters "OFFSEARCH and proceeds through the program questions as usual specifying NPS to the ON-LINE OUTPUT: NPS/PSTG/NONE query. When the actual search begins, the stored search is entered, with the qualifier (SN), as any other term:

*STS*SS1/C?

USER:

DRUG EFFECTS (SN)

The stored search may also be combined with other terms or search statement numbers:

*STS*SS11/C?

USER:

9 OR 10 AND DRUG EFFECTS (SN)

2.15 PROGRAM MESSAGES

Program messages either guide the flow of the user/computer dialog or contain responses to search statements or commands. The following is an alphabetical list of ELHILL program messages, followed by brief descriptions:

MESSAGE

MEANING

ARE YOU AN EXPERIENCED USER?

A YES answer will cause any subsequent messages to be printed in the Symbolic Version. A NO answer will provide messages in the Short Version, and an introductory section with directions for using the ELHILL system will appear preceding the first Search Statement cue.

CNT #

A continuation cue, when search terms for one Search Statement require more than one line (remember to end such continued lines with only an AND or OR.)

CONTINUE PRINTING?

A YES answer will cause the program to print out 25 more lines. A NO answer will offer the user the next Search Statement cue.

CONTINUE SUBS

A continuation cue, received in instances in which the subheadings being applied with the "SUBHEADINGS APPLY" command require more than one line.

DO YOU WISH TO RESTART?

A YES answer causes the program to RESTART, that is, to place the user back at the HELLO FROM ELHILL message. All previous searching will be lost. A NO answer generates the next Search Statement cue.

ONE?

A YES answer will cause the program to "STOP, and will remove the user from the ELHILL 3 programs. A NO answer will generate the next Search Statement cue.

YNAJECT

This message indicates a Dynamic Reject, meaning that all users requests at a given moment will not be processed, due to a sudden shortage of storage space. The user should reenter the previous Search Statement immediately.

MESSAGE

ELHILL 3 IS ABNORMALLY
TERMINATING - PLEASE DO
NOT HANG UP

EXPLANATION REQUESTED HAS
NOT BEEN PREPARED YET

GENTERM OVFL

HELLO FROM ELHILL 3.
YOU ARE NOW CONNECTED TO...

INCORRECT ARGUMENTS TO
BACKUP COMMAND. COMMAND
IGNORED.

'xxxx' IS NOT A CORRECT
COMMAND NAME

'xxxx' IS NOT A VALID
PRINT PARAMETER. COMMAND
IGNORED

KEBTRM OVFL

LIMIT OF 300 DOCUMENTS FOR
OFF-LINE PRINT---COMMAND
DELETED

MM - MULTI-MEANING

*NONE

NON-EXISTENT SSN SPECIFIED.
PRINT COMMAND IGNORED.

NP - NO POSTINGS

OFF-LINE PRINT COMPLETED

MEANING

This message indicates that the system is going into "suspended animation" for an unspecified period of time. Contact MEDLARS Management if you have difficulties (e.g., USER ID ALREADY IN USE) after the system returns to full operation.

This message indicates that the user has entered the "EXPLAIN command preceding a term for which no explanation has been written.

This is a Generated Term overflow, indicating that more than 450 terms have been generated in a given Search Statement.

Greeting message which indicates that the user has entered the ELHILL programs.

Program still waiting for input.

This message indicates that whatever characters have been input following the double quote ("") do not spell a command familiar to the program.

This message indicates that the characters entered after the user's "PRINT command do not spell a data element familiar to the program. Therefore, nothing will be printed.

More than 380 search terms have been entered during the present search session.

The user has requested more than 300 citations to be printed off-line.

The term or "TREE" number entered has more than one meaning in the program. The user may opt to choose one or more meanings, or choose none.

There are no citations in which both the factors ANDed together in the last Search Statement appear.

The user has requested a "PRINT from a Search Statement number that has not yet been used in the present search session.

This message indicates that there is no citation having the search term entered in its unit record.

The program has understood the user's instruction and address for an off-line print.

MESSAGEMEANING

PLEASE ENTER USER ID OR
LOGON

The program requests that the user type the ID code assigned by NLM over the disguising hash marks.

PLEASE ENTER YOUR PASSWORD

The program is requesting that the user type in the special password attached to the user's ID code.

PROCPSTG OVFL

This is a Postings Processor Overflow message, meaning that the total postings retrieved by the Search Statement exceed the storage capacity of the program 160,000 records.

READY

This is a cue for input received by a user when connected to the TSO portion of the computer. ELHIL commands are ineffective as a response. To leave the TSO environment, the user enters LOGOFF.

(#) SEARCHED (#) QUALIFY
CONTINUE?

During a STRINGSEARCH operation, the program stops after processing a given number of records, and asks whether the user wishes to continue the search.

SF,C

Search series full message, indicates that 25 Search Statements have been used, and the user must input a command in order to continue.

SKIP PARAMETER INCORRECTLY
USED. PRINT COMMAND IGNORED.

This message indicates that the user has asked the program to skip a larger number of citations than exist in the Search Statement, and therefore nothing will be printed.

SS #/C?

This is a Search Statement cue, asking the user to input search terms or a command.

SS (#) PSTG (#)

This message tells the user how many records in the file fit the search parameters input.

SSN SPECIFIED HAS FEWER POST-
INGS THAN REQUESTED FOR PRINT.

This message appears when the user has requested the program to print more records than exist in the Search Statement. As a result, none are printed.

STORPSTG OVFL

The limit for postings stored in the user's workspace, 114,000, has been exceeded.

SUBHEADINGS ACCEPTED

The user has used the "SUBHEADINGS APPLY command, and the program has understood the subheadings as entered.

SUBHEADINGS CANCELLED

The program has obeyed the user's "SUBHEADINGS CANCEL command.

MESSAGE

TIME OVFLW: CONT?

MEANING

This message informs the user that the last Search Statement input requires more than one "slice" of time to process. After each "slice" of processing time, the program inquires as to whether or not the user wishes to continue the processing.

UP N OR DOWN N?

When the program is displaying parts of the Index, as in a "NEIGHBOR command, this question is asked of the user to determine how many more entries, and whether "up" the alphabet or "down" the alphabet, should be displayed.

2.16 UNIT RECORDS

Unit records are listings of all categories--searchable and/or printable--for each record in a data base. To see unit records for data bases on-line, type "EXPLAIN (followed by the data base name) after any USER: cue.

EXAMPLE:

SS1/C?
USER:
"EXPLAIN MEDLINE
PROG:
CITATION FILE

THE ITEMS IN THIS DATA BASE CONSIST OF BIBLIOGRAPHIC CITATIONS TO ARTICLES FROM MEDICAL AND BIOMEDICAL JOURNALS. 39 CATEGORIES OF INFORMATION ARE CONTAINED FOR EACH CITATION, AND THESE CATEGORIES ARE LISTED BELOW. 14 OF THESE CATEGORIES ARE SEARCHABLE, I.E., MAY BE ENTERED AS SEARCH TERMS, AND THESE ARE INDICATED BY A * IN THE DISPLAY BELOW.

ABBREVI- ATION	CATEGORY NAMES (* MEANS SEARCHABLE)	NOTES
AU	*	AUTHOR
TI	*	TITLE
CN	*	CITATION NUMBER
ED	*	ENTRY DATE
MC	*	MESH CLASS
		LAST NAME 1ST; NO PUNCT.
		ALSO RANGABLE
		ALSO RANGABLE
		EXPLODE ELEMENT
		.
		.
		.

PART 3 COMMUNICATING WITH THE COMPUTER

3.1 INTRODUCTION

In addition to direct dial access, there are two commercial communications networks, TELNET and TYMNET, available to users of NLM's on-line data bases. These networks permit computer access while reducing or eliminating long distance telephone charges. There are some 150 access points including "node" cities in the United States, Canada, Europe, Central America and elsewhere. Users can dial a local number at the access points or node cities in which they are located and are routed to either the NLM or SUNY computer as requested. Additional node cities are added by the two networks regularly. In addition to these node cities, NLM currently makes an Inward Wide Area Telephone (INWATS) TYMNET and TELNET number available to domestic user institutions not located in or near a node. NLM currently absorbs the cost of the TYMNET, TELNET, and INWATS communication charges for domestic users.

3.2 TERMINALS

The NLM on-line data bases are accessed through a terminal, a typewriter-like or display device which translates characters typed into tones that communication facilities recognize. A further translation occurs which is understandable to the computer and causes the computer to perform the requested operations with the data stored in its memory, and then to transmit the results back to the terminal where they are displayed on paper and/or a cathode ray tube screen.

3.2.1 OPERATING FEATURES

All terminals have certain operating features which determine how they can be used to access NLM data bases. The most important of these features are 1) the transmission code, 2) the duplex and 3) the speed of transmission.

3.2.1.1 TRANSMISSION CODE

There are four transmission codes available. These are: BCD (Binary Coded Decimal), EBCDIC (Extended Binary Coded Decimal Interchange Code), Correspondence Code, and ASCII (American Standard Code for Information Interchange). BCD code cannot be used at this time with NLM data bases. EBCDIC and Correspondence Codes are only available to IBM 2741-compatible terminals and their use is somewhat restricted. ASCII is the most common type of keyboard code and its use is not restricted in any way.

3.2.1.2 DUPLEX

Duplex refers to the way in which characters are displayed and transmitted. In Half Duplex each character is displayed at the terminal as it is typed. In Full Duplex each character is retransmitted from the network node before it is displayed. This causes a slight delay between the time the key is struck and the

time the character is displayed on the paper or cathode ray tube. Users of the TYMNET or TELENET network can transmit in either half or full duplex, but users who dial direct must transmit in half duplex. The advantage of transmitting in full duplex is that characters may be verified--the user can see immediately if the typed characters are correct, or have been distorted by line noise.

3.2.1.3 SPEED OF TRANSMISSION

The speed at which terminals operate is commonly calculated in "characters per second." This is the rate at which responses from the computer can be interpreted by the terminal and displayed on the paper or cathode ray tube. Some terminals are limited to only one speed of transmission, while others have switches which permit the user to choose the speed of operation. Terminal speeds now available range from 10 to 960 characters per second. NLM data bases routinely handle 10, 15 and 30 cps transmission, and 120 cps service is available on an experimental basis to determine the feasibility of providing this service permanently in the future.

3.2.2 TYPES

Terminals fit into various types, all of which can be used to access NLM data bases if certain conventions and procedures are followed. These are: 1) TWX, 2) Teletype, 3) Teletype-compatible, 4) IBM 2741-compatible, and 5) Cathode ray tube.

3.2.2.1 TWX

The Teletypewriter Exchange (TWX) Network cannot handle voice transmissions, only data. Since the per-minute rates of the TWX network are more expensive than those of the telephone network, it is advisable for users of TWX terminals to have an "Alternate Use Arrangement" installed by the telephone company. This is basically a switch which allows the user to operate on either the TWX network or the telephone network. In addition to this switch, there must be a regular telephone beside the TWX terminal with an "exclusion key" feature or with no other extensions on the same line. These terminals are advantageous to low-volume users with a limited budget who may have need for TWX communications in other situations. Disadvantages include the slow transmission speed (10 cps), relatively high noise level, and the size and weight of the terminals which make them difficult to move from place to place.

3.2.2.2 TELETYPE

Teletype terminals are physically similar to TWX terminals, but are designed to be used with the dial telephone or private line network. They are available with either a built-in modem or with a telephone data set. These terminals have the same advantages and disadvantages as the TWX terminals without the need for an alternate use arrangement.

3.2.2.3 TELETYPE-COMPATIBLE

The teletype-compatible, portable terminals are the type most widely used to access NLM on-line data bases. They are manufactured by many different companies and features vary slightly from one model to another. Most of the newer models are relatively small and light, making them easily portable. Almost all have optional built-in acoustic couplers and printing units which operate very quietly. In addition, most have switches enabling them to operate in full or half duplex and in speeds ranging up to 30 cps. (Some newer models operate at speeds up to 120 cps.) One disadvantage to some institutions may be the fact that they are relatively more expensive to purchase or lease than TWX or Teletype terminals. If the terminal is equipped with an Automatic Line Feed switch, this switch must be in the "OFF" position in order to access the computer.

3.2.2.4 IBM 2741-COMPATIBLE

IBM 2741-compatible terminals generally present more problems of compatibility with the NLM on-line systems than any other type of terminal. The primary problem lies in the fact that they do not use the ASCII transmission code. Instead, they transmit in one of the three other codes. The code of a particular terminal can be determined from the character in the upper case position on the key for the numeral 2:

BCD	• (degree symbol)
EBCDIC	< (less than symbol)
Correspondence	¤ (at symbol)

BCD coded terminals cannot access NLM on-line data bases and therefore will not be discussed. In the case of TYMNET access, EBCDIC terminals must access an EBCDIC node while Correspondence terminals must access a Correspondence node. The exception to this are nodes which are compatible with both types of codes (coded "B" in the PHONES file, see PART 3.7). When using a "B" node, the 2741 user must type a P followed by a carriage return and the node will then determine the "code" to be used. TELENET accepts both codes at all of its nodes. Each code has different procedures for correcting errors and for interrupting output. These codes will be discussed in more detail in the section of LOGIN, LOGOFF and GENERAL MECHANICS.

All terminals of this type operate at the rate of 15 cps, are not portable, and are generally noisier than teletype-compatible models. They are, however, widely used in other computer applications and may be easier to obtain in some institutions.

IBM MAG CARD Typewriters having a communicating feature may also be used. These are similar to IBM 2741 terminals.

3.2.2.5 CATHODE RAY TUBE

Cathode ray tube terminals are generally the quietest class of terminal, but unless they are equipped with a hard-copy printer in addition to the CRT scope, they may be inconvenient for searching. A printer, of course, adds a noise factor. However, the CRT terminal is advantageous in some situations. It provides better visibility for groups in training or demonstration situations, and is good for searches in which single records are verified and do not need to be printed in hard copy. CRT terminals are generally not readily portable.

3.2.3 SELECTION

In summary, the following factors should be taken into consideration when choosing a computer terminal for communicating with the NLM on-line data bases:

- 1) Cost
- 2) Availability of on-site maintenance
- 3) Speed of operation
- 4) Portability
- 5) Noise level
- 6) Compatibility with communications networks
- 7) Volume of use terminal will receive
- 8) Ease of operation
- 9) Possibility and ease of photocopying output
- 10) Paper output vs CRT display

3.3. MODEMS/AcouSTIC COUPLERS

There are basically two different ways in which information is transmitted over telecommunication media. It can be analog (a continuous range of frequencies transmitted) or digital (a stream of on/off pulses or bits are transmitted). Telephone channels are analog while data travels in computer circuits digitally. When computer data is sent over telephone lines, the digital bit stream has to be converted into an analog signal using a device known as a modem or acoustic coupler. That is, in order to transmit information, the information must be manipulated electronically until it occupies the same range of frequencies as does the voice over the telephone. This process is called modulation and it is the function of a modem to perform this process. At the other end of the line, a similar device must perform the reverse process of converting the transmitted signal back into pulses or bits which are meaningful to the receiving machine; this process is called demodulation.

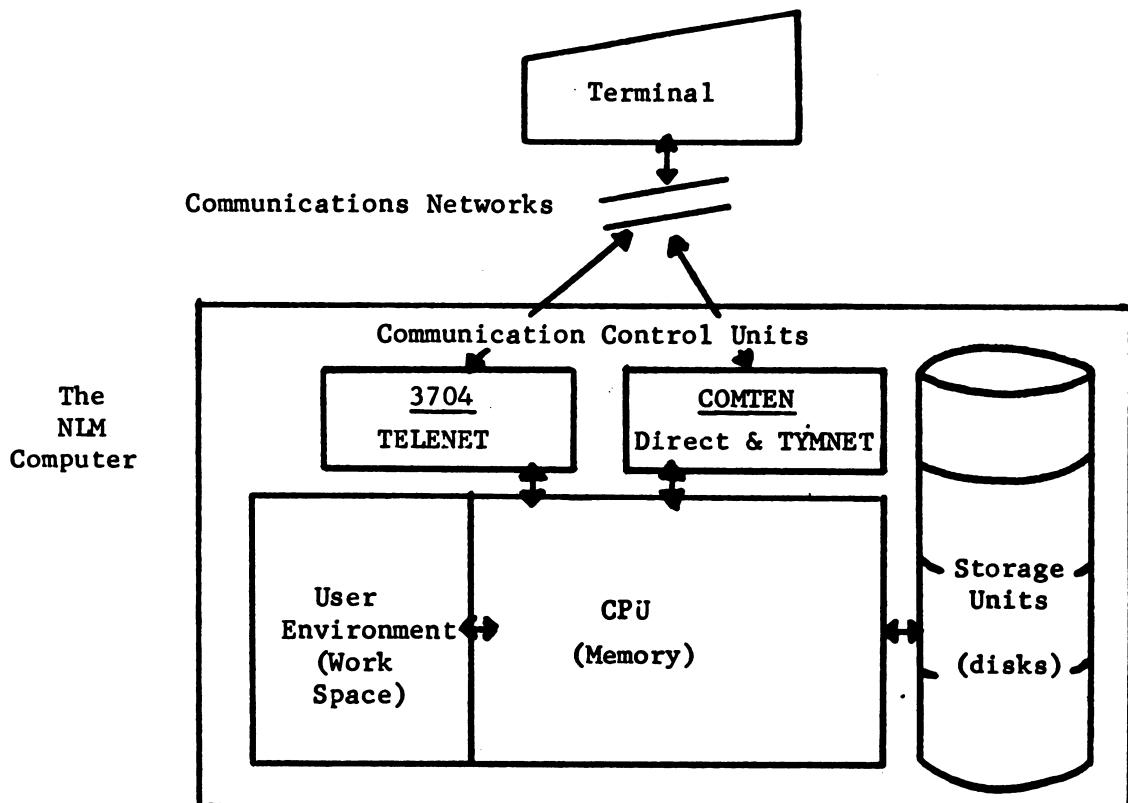
A modem is the small box of electronics which performs both modulation and demodulation and the word modem is a contraction of modulation-demodulation. A modem is called a data set by AT&T and may include a telephone instrument. It is sometimes called a "line adaptor" by IBM. These modems and/or acoustic couplers are sometimes built into terminals. Many terminals operating at 30 cps have built-in acoustic couplers.

For 1200 baud transmission (120 cps), there are basically three modems available which are compatible with the NLM computer. One is the Bell Telephone Company's 202 series which operates in half duplex. Both TYMNET and TELNET offer 202-compatible numbers for accessing the NLM computer. Another is the Bell Tele-

phone Company's 212A modem. This modem offers full duplex and the capability of using a terminal with the modem at either 30 cps or 120 cps; the HS (high speed) button is depressed if 120 cps is desired. A third modem available for 120 cps transmission is that produced by the VADIC Company, specifically the model VA3405A. Certain 120 cps telephone numbers are available for VADIC users. DIRECT, TYMNET, and TELNET 1200 baud access numbers are available to NLM users in the PHONES list, obtained via a LOGON entry. The PHONES list is in state and city order with the type of number (B meaning Bell 202, 212 or 212A, and V meaning VADIC) included. Users must use the phone number which is compatible with their particular modem.

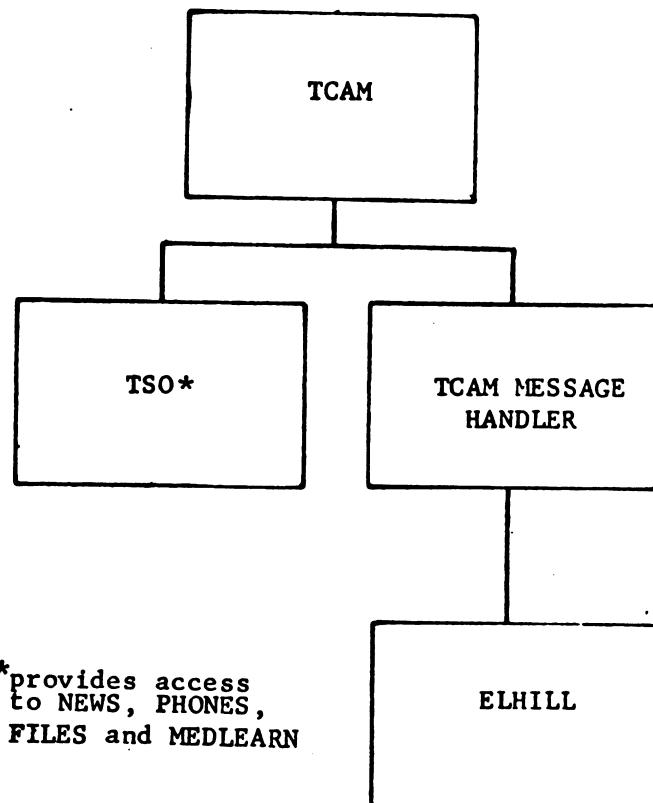
3.4 GENERAL COMPUTER CONFIGURATION

A general understanding of the way in which the computer is structured to respond to search formulations will help to insure both efficient and effective use of the system. In general, the computer and its related equipment can be divided into four areas: 1) the Central Processing Unit (CPU), 2) the User environment (work space), 3) the storage units (disks), and 4) the communications control units.



3.4.1 CPU

The central processing unit (CPU) is the processor of all operations in the system. In a large system such as the IBM 370/158MP used at the National Library of Medicine, different sets of search programs (or sets of instructions) are kept in the CPU for each group of files stored in the computer. The ELHILL programs which control access to all of the files described in this Manual are only one of several sets of programs stored in the CPU. Access to each of these sets of programs is controlled by another set of programs called the Operating System (OS). CPU time for each user is apportioned through a procedure known as time-slicing; the computer cycles are divided into increments of time and offered in turn to each on-line user. During each user's "turn," the computer performs as if that user were alone on the system. During any one "slice" of time, one user's request is being processed while the other users' requests are stored. Each is rotated sequentially to the computer for processing. The amount of time it takes the CPU to evaluate and act upon a request is commonly called "CPU time." The various parts of the CPU can be diagrammed as follows:



*provides access
to NEWS, PHONES,
FILES and MEDLEARN

Information from the user's terminal enters the system through either of two communications controllers (or "front-ends"), the 3704 (TELENET lines), or the COMTEN (Direct Dial and TYMNET lines) and is sent to TeleCommunications Access Method (TCAM). This in turn relays the information either to the ELHILL programs (/LOGIN) via the TCAM message handler, or to the Time Sharing Option (TSO) (LOGON), depending upon whether the user has specified /LOGIN or LOGON.

When searching the files described in this Manual, it is common to say that the user is "in ELHILL," meaning that the search activities are being controlled by the ELHILL programs. When accessing the NEWS, PHONES, FILES or MEDLEARN files, the user is said to be "in TSO," meaning that the activities are being controlled by the Time-Sharing Option programs.

3.4.2 USER ENVIRONMENT

The user environment is actually a composite area in the computer composed partly of space within the CPU and partly of storage space on disks. This work space is used to store each search formulation and the resulting lists of citation numbers. Before a final list, or "answer," to one search statement is stored, it may be necessary for the computer to generate and save lists of citation numbers called intermediate results. Intermediate results are created because the computer can only compare the lists of citation numbers for two search terms at a time. The results of the first comparison must then be compared with the list for the third search term, and so on, until the final list is generated and stored. Each user has a fixed amount of permanent work space and a part of a general work space shared with all other on-line users. If the user runs out of allocated work space, an overflow condition will result, and an overflow message will be generated by the ELHILL programs and sent to the terminal.

3.4.3 STORAGE UNITS (DISKS)

Search terms, postings, and the actual citations from each of the on-line files controlled by the ELHILL programs are stored for rapid access in devices known as disk packs or disks. The time required for the computer to find these data elements on the disks, "read" them into the user environment, and then "write" the results of the processing into disk storage areas of the user environment is called Input/Output (I/O) time; I/O time is a major component of the total response time for each interaction.

3.4.4 COMMUNICATIONS CONTROL UNIT

The Communications Control Unit is responsible for handling communication protocols and for interacting with TCAM. This Message Control Program (MCP) also retranslates the computer processing code into a message acceptable to the communications networks (TYMNET, TELNET, TWX or Direct Dial) and places it into another queue for transmission to the appropriate user. This, along with CPU time and I/O time, is a significant component of the total response time.

3.4.5 SYSTEM RESPONSE TIME

The following is an outline of what happens from the time the user presses the carriage return key on the terminal until the first character of the response is received. The total time period for this process is known as the system response time.

- 1) Press the carriage return key.
- 2) Message is sent through the communication network (e.g., TYMNET, TELNET, TWX or Direct Dial).
- 3) Message is received by the Communications Control Unit at the computer, converted into a computer processing code, and placed in a queue with other users' messages.
- 4) Message is processed in turn by the ELHILL programs; processing consists of CPU time and I/O time.
- 5) Response is returned to the Communications Control Unit and reconverted into a message.
- 6) Response message is sent through the communication network.
- 7) Response message is displayed at user's terminal.

3.5 LOGIN AND LOGOFF

The mechanics of accessing the system, correcting errors and disconnecting from the system vary according to two principal factors:

- 1) The communications network used, and
- 2) The type and speed of terminal used.

For purposes of login/logoff and mechanics, communications can be divided into two groups:

- 1) Direct Dial (includes FTS and TWX)
- 2) TYMNET and TELNET (including INWATS lines).

For the same purposes, terminals can be grouped into two broad categories:

- 1) Teletype-compatible - ASCII code, and
- 2) IBM 2741-compatible - EBCDIC or Correspondence code.

When applicable the procedures outlined below will be subdivided by the communication network and terminal category used.

3.5.1 LOGIN PROCEDURE

Login refers to the procedure used to connect the terminal to the on-line system and identify that terminal as an authorized user of the system before searching of the data base(s) begins.

3.5.1.1 DIRECT DIAL LOGIN

The procedure for logging in to the NLM system using a direct dial or TWX number is quite straightforward because the user is being checked only by the NLM computer. It is not possible for users to direct dial into the SUNY computer at this time. The following chart outlines the direct dial login procedure for the acoustic-coupled terminals. Points at which the carriage return key must be pressed are indicated with: CR .

Acoustic-Coupled/ASCII terminals/(Teletype-Compatible)

1. Turn power switch on.
2. Set switches if terminal has them to:

Half-duplex
10, 30, or 120 cps

3. Dial appropriate number for the terminal operating speed.
4. After receiving tone, connect receiver to acoustic coupler.
5. There will be no prompt from the system. Wait for on-line signal to come on, then enter /LOGIN or CR .
6. If a carriage return (CR) only is entered the system will prompt:

PLEASE ENTER /LOGIN

7. After entering /LOGIN followed by a CR, with or without system prompting, the system will then prompt:

PLEASE ENTER USER ID OR LOGON:
#####

8. Enter user ID over the disguising marks.
9. System responds with greeting, etc.

3.5.1.2 TYNMNET LOGIN

The procedure for logging in through the TYNMNET network, including the TYNMNET INWATS line, involves a few more steps than does direct dial. Once the network connects the user with either the SUNY or NLM computer, the procedure is almost exactly the same as for using the direct dial access. The following chart outlines the TYNMNET login procedure for ASCII and for 2741-compatible terminals.

**Acoustic-Coupled
ASCII terminals
(Teletype-Compatible)**

1. Turn terminal power switch on.
2. Set switches, if terminal has them, to:

Full- or half-duplex
10 or 30 cps.
3. Dial telephone number of local TYMNET node (or INWATS line).
4. After receiving the tone, connect the receiver to the acoustic coupler.
5. System types either a string of nonsense characters or prompts with:

PLEASE TYPE YOUR TERMINAL IDENTIFIER:

- User types one of the following letters without a carriage return depending upon the type of terminal being used and its transmission speed:

A - CRT terminals set at 30 cps or 120 cps without paper printer (such as Datapoint 3300, Infoton, and other CRT's without paper printers).

B - Model 37 teletype terminals operating at 15 cps.

C - Terminals set at 30 cps with impact printers and a fast carriage return or CRTs (such as Hazeltine

**Data Set-Connected
EBCDIC & Correspondence terminals
(IBM 2741-Compatible)**

1. Turn terminal power switch on.
2. Set switch on lower left side panel of terminal to COM.
3. Press "talk" button on data phone and dial number of local TYMNET node (or INWATS line). Be sure the node is EBCDIC if your terminal is EBCDIC or Correspondence if your terminal is Correspondence - each node supports only one or the other.
4. After receiving the tone, press the "data" button and replace the receiver.
5. A soft "click" indicates that the locked keyboard has been released.

6. User enters a carriage return (CR) if using an EBCDIC or Correspondence node. User enters a P followed by a carriage return if using a node that allows both EBCDIC and Correspondence transmission.

2000) operating with paper printers at 30 cps.

D - Model 33/35 teletype terminals operating at 10 cps.

D - Teletype-compatible portable terminals set at 10 cps.

E - Most teletype-compatible portable terminals set at 30 cps such as Execuport, Texas Instruments, Diginet, etc. (see letter G below for the two exceptions).

E - Some CRT terminals set at 30 cps with thermal printer.

F - Beta terminals.

G - Memorex or G.E. Terminate terminals (belt printers) set at 30 cps.

A list of specific terminals and identifiers follows:

<u>TERMINAL</u>	<u>ID</u>	<u>TERMINAL</u>	<u>ID</u>
ADDS 580, 880, 980, 680	A	Conrac 401, 480	A
Anderson Jacobson 330 830, 832 630	CR* A E	Control Data 713	A
Ann Arbor Design III, 200	A	Computer Transceiver Execuport	E
Beehive Mini Bee 1, 2, 4 Super Bee 2, 3	A A	DEC LA36, VT05, GT40	A
Car-Mel I-211, R-211, M-501	A	Data Media 1500, 2000, 2500, 2100	A
Computer Devices 1030	E	Datapoint 3000, 3300, 1100	A
Computek 200, 300	A	Delta Data 5000, 5100, 5200	A
		Digi Log 209, 33, 300	A

<u>TERMINAL</u>	<u>ID</u>	<u>TERMINAL</u>	<u>ID</u>
Gencom 300	A	Raytheon PTS-100	A
General Electric 300	G	Singer 30	E
Hazeltine 1200, 2000	A	Scientific Mgmt. Systems 1440	A
Hewlett Packard 2615, 2616	A	TEC, Inc. 400 Series, 1440	A
IBM 2741	CR* or P	Tektronix 4012, 4013, 4014, 4023	A
Interdata Carousel 300	E	Teletype 33, 35 38	D B
Incoterm SPD 10/20, 900, 20/20	A	Texas Instruments 720, 725, 733, 735 743, 745	E A
Infoton Vista	A		
ITT 3501 Asciscope	A	Texas Scientific Entelkon 10	A
Lear Sigler 7700, ADM-1, ADM-2	A	Typagraph DP-30	C
Megadata	A		
Memorex 1240	G	Tymshare, Inc. Models 100, 110, 125, 212 and 213 200 310 325, 311 315	E D C A E
NCR 260 796	E A		
Omron 8525	A	Wang Laboratories 220 OB	A
Ontel 4000	A	Westinghouse 1600, 1620	A
Research Teleray 3300, 3311, 3712	A	Xerox BC100, BC200	A

*CR indicates a carriage return.

**Acoustic-Coupled
ASCII terminals
(Teletype-Compatible)**

7. System then returns the carriage and types:

PLEASE LOG IN:

8. User types one of the following, depending upon which computer is to be used:

NLM CR

or (routes to NLM)

NLM2 CR

or

SUNY CR (routes to SUNY)

If the terminal is set at half duplex, two keys must be pressed before typing NLM or SUNY. First depress the CONTROL key, and hold it down while simultaneously pressing the letter "H". This procedure is abbreviated thus:

CH

Note that use of NLM2 is required for 120 cps terminals if they are to operate at anywhere near full speed. 30 cps terminal users may use either NLM or NLM2. Also, note that use of the code NLM allows either upper/lower case or upper case only printing while printing citations on-line with terminals equipped for upper/lower case print. Use of the code NLM2 restricts on-line printing to upper case only.

9. The system types:

PASSWORD:

10. User types the 3 character password given to all users:

XXX CR

**Data Set-Connected
EBCDIC & Correspondence terminals
(IBM 2741-Compatible)**

7. System then returns the carriage and types:

PLEASE LOG IN:

8. User types one of the following, depending upon which computer is to be used:

NLM CR

or (routes to NLM)

NLM2 CR

or

SUNY CR (routes to SUNY)

9. The system types:

PASSWORD:

10. User types the 3 character password given to all users:

XXX CR

These letters do not print out at the terminal, and the paper does not advance a line after the CR.

11. The network will respond with a semicolon. At this point, the terminal is connected to either the NLM or SUNY computer. The system will prompt with a PLEASE ENTER /LOGIN message.

11. The network will connect the user to the system specified which will then prompt with a PLEASE ENTER /LOGIN message.

(From this point on the procedure is the same for both types of terminals)

12. The user types /LOGIN and presses CR.

13. The system responds with:

PLEASE ENTER USERID OR LOGON
#####

The user types the ID code over the disguising marks and presses CR.

14. System responds with the greeting:

HELLO FROM ELHILL 3

3.5.1.3 TELENET LOGIN

TELENET provides remote access to the NLM and SUNY computers. Again, some initial steps are involved in order for the network to route the user to the requested computer system. Once the user is connected to the requested system, the login procedures are the same. The chart below outlines the login procedure for ASCII and for 2741-compatible terminals:

Acoustic-Coupled
ASCII terminals
(Teletype-Compatible)

1. Turn on terminal power switch.
2. Dial TELENET access number, either the local "node" or the INWATS number.
3. When high-pitched tone is heard, attach receiver to coupler. If transmitting in full-duplex, enter two carriage returns. If transmitting in half-duplex, enter a carriage return, semicolon, and another carriage return:

Data Set-Connected
EBCDIC & Correspondence terminals
(IBM 2741-Compatible)

1. Switch to off-line or batch.
2. Dial the local TELENET node or the INWATS number.
3. Switch to REMOTE or COM and then enter a period and carriage return.

CR ; CR

(From this point on the procedures are the same for both types of terminals)

4. TELNET will identify itself and ask for a terminal identification code.

TELNET

202 DL9

TERMINAL=

A list of terminals and identifiers follows:

TELNET Terminal Model Identifiers

Enter the identifier for your terminal model in response to the network inquiry
TERMINAL=.

<u>Terminal Model</u>	<u>Identifier</u>
Anderson Jacobson 630	AJ63
Anderson Jacobson 830 & 832	AJ83+
Anderson Jacobson 841	*
Applied Digital Data Sys. 520, 580, & 980	ADDS+
Beehive MiniBee 2	BHMB+
Computer Devices CDI 1030	CD30
Computer Devices CDI 1132	CD11+
Computer Devices CDI 1202 & 1203	CD12+
Computer Transceiver Execuport 300	CT30
Computer Transceiver Execuport 1200	CT12
Data Products Portaterm	DPPT+
Data Terminal & Communications DTC 300	DT30+
Datapoint 2200	DP22
Datapoint 3000 & 3300	DP30
Diablo Systems 1550 & 1620	DS16+
Digital Equipment LA35/36 DECwriter II	DECW
Digital Equipment VT50 & VT52	DECY+
Digi-Log 33 & Telecomputer II	DGLG+
Gen-Comm Systems 300	GS30+
G.E. TermiNet 30	TN30
G.E. TermiNet 120	TN12
G.E. TermiNet 300	GE30
G.E. TermiNet 1200	GE12
Hazeltine 2000	HZ20
Hewlett-Packard 2640, 2644, & 2645	HP26+
IBM 2741 EBCD (with type)	
963, 996, 998	IBM1
938, 939, 961, 962, 997	IBM2
942, 943	IBM3
947, 948	IBM4

Terminal ModelIdentifier

IBM 2741 Correspondence (with type)	
001, 005, 007, 008, 012, 022, 030	IBM5
050, 053, 067, 070, 085	IBM6
006, 010, 015, 019, 059, 090	
021, 025-029, 031-039, 060, 068,	IBM7
086, 123, 129-145, 156, 161	IBM8
043, 054	*
IBM 3767 & 5100	
Infoton Vistar Display	IFVD
Lear Siegler ADM1, ADM2, & ADM3	LSAM+
Memorex MRX 1240	*
NCR 260	NC60+
Research Inc. Teleray 3300 & 3700	R133
Tektronix 4002-4023	TK40+
Teletype 33	TT33
Teletype 35	TT35
Teletype 40	TT40
Teletype 43	TT43+
Texas Instruments 725	TI25
Texas Instruments 733	TI33
Texas Instruments 735	TI35
Texas Instruments 743 & 745	TI74+
Texas Instruments 763 & 765	TI76+
Trendata 1000	*
Trendata 4000	TD40+
Univac DCT 500	UV50
Western Union EDT 300	WU30+
Western Union EDT 1200	WU12+

* Same as IBM 2741

+ This ID will be available for use in January, 1978. Until it is implemented, enter one carriage return in response to the "TERMINAL=" prompt. If you have any questions, please contact MEDLARS Management Section.

5. For most thermal printers, a carriage return entered at this point will be sufficient. Consult the list above for other identifiers.
6. The network will ask for the users area code only if access is through the INWATS line:

YOUR AREA CODE=

User simply enters the telephone area code and presses the CR.

7. The network then types an at (@) symbol on the next line. At this point the user types in the address of the computer to be accessed:

 @C301 20 (for NLM) or @C518 ML (for SUNY)

8. System responds with:

 ### XX CONNECTED

9. Type /LOGIN and press CR
Computer will prompt with:

 PLEASE ENTER USERID OR LOGON:
 #####

The user types the ID code over the disguising marks.

10. The system responds with the greeting:

 HELLO FROM ELHILL 3 ...

3.5.1.4 DIRECT DIAL LOGIN ERROR MESSAGES

Line noise or typing mistakes will cause incorrect input to the system and the user will then receive an error message. Any error in the user's ID code will cause the system to respond with the message:

 BYE BYE...
 YOUR USER CODE IS UNKNOWN TO ELHILL 3.
 PLEASE CONTACT SYSTEM PERSONNEL FOR ASSISTANCE.

The system will not disconnect at this point. Press the carriage return in order to again receive the message: PLEASE ENTER /LOGIN. Re-login by typing /LOGIN followed by a carriage return and when the message PLEASE ENTER USERID OR LOGON is received, enter the proper ID code.

If there is an error in the password (passwords are attached to some users' ID codes) the system will respond:

 PASSWORD IS INCORRECT
 TYPE PASSWORD

If the password is incorrect on the second attempt, the system will give the message GOOD-BYE! and disconnect.

3.5.1.5 TYMNET LOGIN MESSAGES

The first communication from TYMNET to the user is PLEASE TYPE YOUR TERMINAL IDENTIFIER. If the user responds with any typing other than the correct identifier, entered WITHOUT a carriage return, there will be no response from the network. The user should hang up the phone and then re-dial and attempt to re-connect, making sure that the correct terminal identifying character is input in response to the TYMNET prompt. If an error occurs after the PLEASE LOG IN: prompt, the network will respond:

ERROR, PLEASE TYPE USER NAME

This is a request for the name of the computer system (either NLM or SUNY) the user wishes to access.

An error in entering the correct password in response to the PASSWORD: prompt will generate the message:

ERROR, PLEASE TYPE PASSWORD

The user should reenter the correct three-character network password (not to be confused with the optional code-attached password requested by the computer after the user has entered the ID code).

Depending upon the status of the telecommunications network or the host computer, several messages may appear during login:

HOST DOWN - This message indicates that the host computer (NLM or SUNY) is not operating at the moment.

HOST SHUT - This indicates that traffic is not being permitted at this time.

HOST OUT OF PORTS - This message indicates that all telecommunications lines between the host and its communicating portion are busy.

ALL PORTS BUSY - This message indicates that all telecommunications lines between the network and the host are busy. Try an alternate host such as NLM or NLM2 or SUNY.

CIRCUITS BUSY - This indicates that, although all systems are operational, there are no available lines from TYMNET to the host. When this message is received, the user should try a

different telephone number or wait a few minutes and try the same one again.

HOST NOT AVAILABLE - THROUGH NET - This message may mean: (1) the TYMNET node in the particular city is not operating, (2) an invalid host computer has been requested (perhaps mistyped), or (3) a new Supervisor (the computer which routes users over the network to the host computers) is taking over the network and has not yet picked up that host. Try again in a few minutes.

DROPPED BY HOST - SYSTEM - The user has logged off and/or has been disconnected. If the session is finished, hang up; if not, try again.

If several consecutive error messages are generated, or login lasts longer than 90 seconds, the network will give the message:

PLEASE SEE YOUR REPRESENTATIVE
IF YOU ARE HAVING TROUBLE....

and disconnect itself from the terminal. Please call the MEDLARS Management Section at NLM (301/496-6193) if you are unable to enter the system and do not understand why.

3.5.1.6 TELENET LOGIN MESSAGES

There are two characters displayed by TELENET to request user input: (1) the at symbol (@) which indicates that the network is waiting for a command and (2) the question mark (?) which means that the network does not understand the command.

An error in entering the computer address will generate the message:

ILLEGAL ADDRESS
@

The user should reenter the correct address after the @ symbol. Other TELENET messages include the following:

ILLEGAL DESTINATION ADDRESS - Connection is not permitted.

ILLEGAL SOURCE ADDRESS -	Network will not accept input from this terminal.
ILLEGAL ADDRESS -	Non-existent address. Check for a typing error.
(Address) NOT AVAILABLE -	
(Address) NOT RESPONDING	
(Address) NOT OPERATING	The computer is not currently available to network users.
(Address) NOT REACHABLE -	The computer cannot respond because of a temporary telecommunications system problem.
(Address) STILL CONNECTED -	The terminal is still actively connected to the computer. If you wish to resume the session, enter the command CONT to continue.
(Address) STILL PENDING -	Connection is in process. If you wish a connection to a different computer address, you must type D for disconnect.
(Address) CONNECTED -	Informs user that connection has been successfully established.
(Address) BUSY CONNECTIONS - UNAVAILABLE	All of the computer's TELENET telecommunications ports are busy.
(Address) DOES NOT SUPPORT - TERMINAL	Connection is not permitted because of the terminal model or mode.

3.5.1.7 LINE FEED IN OFF POSITION FOR LOGIN

Many terminals have an option for sending a line feed after the carriage return. ELHILL 3 will not accept this line feed when it is transmitted after a carriage return. Two modes (Direct Dial and TELENET) of network access do not strip this character before transmission to the NLM systems. It is recommended that this feature be in the off position when using the NLM On-Line systems.

3.5.2 LOGOFF PROCEDURE

Logoff refers to the procedure used to disconnect the terminal from the on-line system after searching of the data base(s) has been completed.

Regardless which telecommunications system has been used, the logoff procedure begins with the same command

USER:
"STOP

in any ELHILL program.

3.5.2.1 DIRECT DIAL LOGOFF

When dialing directly, the user types "STOP. The program responds:

TIME #:#:#:#
USER. NLM TIME ##:#:#:#

PROG:
DONE? (Y/N)
USER:

The first TIME listed is the connect time (hours:mins:secs) used during the preceding search session.

The second time is the time of day at Bethesda, given in military time. After the DONE? question, the user types YES or NO. If NO is typed, the program will return the user to the last search statement, to continue the session. If the user types Y or YES, the program will respond:

GOODBYE!

and the carrier detect light will go out, indicating that the system has disconnected from the terminal.

3.5.2.2 TYMNET LOGOFF

After answering YES to the DONE? question and receiving the GOODBYE!, the user receives the prompt:

DROPPED BY HOST SYSTEM:
PLEASE LOG IN:

which means that the network is ready to connect the terminal to another system. To disconnect completely, the user must hang up the telephone.

3.5.2.3 TELENET LOGOFF

After the GOODBYE! message, the user will receive the message:

301 20 DISCONNECTED
(or 518 ML if the user was connected to SUNY)

The user may enter another computer address and connect to another system at this point. To disconnect completely, hang up the telephone. In some instances, the user may be dropped from the computer but not be disconnected entirely. Users will receive an at symbol (@) from Telenet. In this case the user should type CONT (or CONTINUE) after the @ and should be reconnected to the data base he was searching previously.

3.5.2.4 AUTOMATIC LOGOFF

When there has been no interaction between the terminal and the computer for 15 minutes, the computer will automatically disconnect the user and release that ID code. The user is billed only for connect time used BEFORE the interaction ceased, not for the last 15 minutes.

3.5.2.5 OTHER TYPES OF LOGOFF

A user may press the "break" key to disconnect from the system at SUNY. However, if the break key is entered while on NLM, the system may not release the user's ID code for 15 minutes, sending the message:

USERID ALREADY IN USE

when the user attempts to login again. In the same manner, when the telecommunications network or the host computer accidentally disconnects the user, the same message may be received for 15 minutes following the disconnection. The user is not charged for the intervening minutes unless he is able to re-access the system and his search during this 15 minute period. It is because of the USER ID ALREADY IN USE message and the 15 minute delay that users are urged to wait for the GOODBYE! message when logging off. The GOODBYE! verifies that the host system has released the user's ID code.

On some occasions the host computer may send the message

ELHILL 3 IS ABNORMALLY TERMINATING
PLEASE DO NOT HANG UP

This means that the system will be in "suspended animation" for a short period, and that hanging up or otherwise breaking the connection between the terminal and the host may cause the user's ID code to be held in the message handling portion of the system. If this occurs, the code cannot be released and will remain in the system until it goes down, either scheduled or unscheduled.

At times, the host system may offer no response to a user's input, although the on-line carrier detect light remains on. A carriage return should be used to try to elicit a response. If this fails to work, the user should wait for a few minutes, then hang up. The user should then attempt to login again. On-line searches done during the interrupted session will be lost but off-line prints or offsearches completed will be processed.

3.6 BROADCAST MESSAGES FROM NLM

When logging into the NLM computer, users may receive short messages of immediate and general interest as part of the greeting. Broadcast messages are not received by users already logged on when the message is input. Only users logging in after the message was input receive the message.

3.7 GENERAL INTEREST NEWS FILES

In addition to broadcast messages, there are three general information files (NEWS, PHONES, and FILES) available to users. These are stored in the Time-Sharing Option (TSO) portion of the NLM computer only which is accessed via a LOGON entry. The NEWS file contains important, current information about the ELHILL programs, such as updates to files, advance notice of system unavailability, and other items of interest. The PHONES file lists the telephone access numbers for TYMNET, TELENET and DIRECT DIAL connections to the computer. The FILES file contains information about the various data bases, such as total number of citations, years of publication included, and so on.

In order to access the NEWS, PHONES or FILES files, the user types LOGON after the prompt:

ENTER USERID OR LOGON
#####

After typing in LOGON the user will receive the prompt:

IKJ56700A ENTER USERID -

After entering the ID and pressing the CR the TSO greeting appears:

LOGON IN PROGRESS AT #:#:##:# (time) ON (month) ##,## (date)
NO BROADCAST MESSAGES
DO YOU WANT NEWS, PHONES, FILES OR MEDLEARN?
ENTER YES OR NO:

After entering YES the user will receive the prompt:

WHICH DO YOU WANT?
ENTER NEWS, PHONES, FILES OR MEDLEARN: (MEDLEARN access is discussed
in Section 20.)

User types in the desired file name and presses CR

If the user answers NO to the first question or gives the command LOGOFF at the completion of the use of the file, the system will respond:

~~MEDLINE IS AVAILABLE UNDER TCAM
ENTER/LOGIN TO USE MEDLINE
LOGGED OFF TSO AT ##:##:## (time) ON (month) ##,#### (date)~~

When the user then enters /LOGIN the system asks for the user's ID code, as usual. If the user does not get the LOGGED OFF TSO message, the ID code may be held for 15 minutes in the TSO portion, but this will not prevent access to the ELHILL programs.

These files may also be accessed from ELHILL directly by typing LOGON after any USER: cue. The user will then be asked to enter his ID and will receive the greeting from TSO as well as the DO YOU WANT NEWS, PHONES, FILES, OR MEDLEARN message.

PART 4 ELHILL SEARCHING

4.1 INTRODUCTION

The ELHILL 3 programs which control the on-line search portion of the MEDLARS II system grew out of the AIM-TWX (ELHILL 1) and MEDLINE (ELHILL 2) search portions of the MEDLARS I system. With the conversion to MEDLARS II in the Fall of 1974, the ELHILL 3 on-line search programs were completely integrated into the MEDLARS system. This increased the efficiency of the system and added new search capabilities to the ELHILL software.

The sections below describe in some detail the ELHILL 3 search programs and the capabilities available to users of all the specific data bases controlled by this software. The examples given are largely from the MEDLINE data base, but they are intended to illustrate general capabilities useful in searching all data bases

4.2 CONFIGURATION OF ELHILL FILES

All of the data bases described in this manual and supported by the ELHILL programs are searched principally by a method called "Inverted Index" searching. This means that each file or data base (MEDLINE, SDILINE, CATLINE, SERLINE, TOXLINE, etc.) actually consists of a "retrieval file set" of three internal computer files: An Index File, a Postings File, and a Header or Data File.

The Header File consists of all the complete "unit records" or citations in the data base, each identified by an arbitrary, unique Computer Assigned Number (CAN number). These unit records contain all of the printable and searchable parts of each citation arranged in the format of the on-line "PRINT DETAILED option (see the description of the unit record for each data base).

The Index File consists of all the unique occurrences of the data elements of the unit records in the data base which have been designated as Search Terms or Index Terms. In the descriptions of the specific unit records of the data bases certain categories of information are labeled "searchable." This means that they have been included in the Index File of that retrieval file set. Some of these search terms are words (such as authors' names), some are numbers (such as dates) and some are alpha-numeric (such as MeSH classification numbers). The Index File is like a dictionary to the search terms from the unit records. These terms are arranged in one continuous alphabetic listing, A - Z, followed by entries arranged decimal, 1 - 9999. Each entry consists of one search term followed by the name of the category indicating which field of the unit record it comes from (such as AU for Author), and a two-part number. The first part of the number is an address or beginning location of entries for that search term in the Postings File. The second part of the number indicates how many "postings" or unit records contain that search term. The following is an illustration of what part of the Index File for MEDLINE might look like:

<u>Search Term</u>	<u>Sequence Number Address</u>	<u>Postings</u>
AAØ (JC)	4	179
ABDOMEN (MH)	527	3213
AGED (MH)	1073	51604
AGEE JW (AU)	1075	4
.	.	.
.	.	.
A2 (MC)	3014	16912
A2.10. (MC)	3017	2505
A2.10.18. (MC)	3020	321
.	.	.
.	.	.
Zymosan (MH)	10379	62
700110 (ED)	112368	250
740403 (ED)	112973	213
.	.	.
.	.	.

The Postings File consists of groups of CAN numbers corresponding to the unit records associated with each search term in the Index File. It is the link between the Index File and the Header File. It also makes it possible to store intermediate and final results of searches in the user environment in the form of lists of numbers, which are much quicker and easier to handle than entire unit records from the Header File. In the most common type of searching where "searchable elements" from the Index File are used, only the Index and Postings Files come into play. The Header File is then accessed to "PRINT records corresponding to lists of postings already retrieved from the Postings File.

A typical search would be processed as follows. A "parser" routine looks at the string of characters in your search statement and looks for quotation marks to distinguish a command. If none are present it then looks for the Boolean logical operators AND, OR and NOT, and assigns search term status to the strings of characters between these logical operators. Then each of the search terms of the search statement are validated against the Index File, and the corresponding lists of CAN numbers from the Postings Files are compared two at a time until a final list is stored in the user's environment. The program then responds with a message indicating the number of postings which were retrieved. This stored list of postings can then be used in later search statements, or the corresponding unit records in the Header file can be printed using one of the "PRINT commands.

The illustration below shows graphically how such a search is processed:

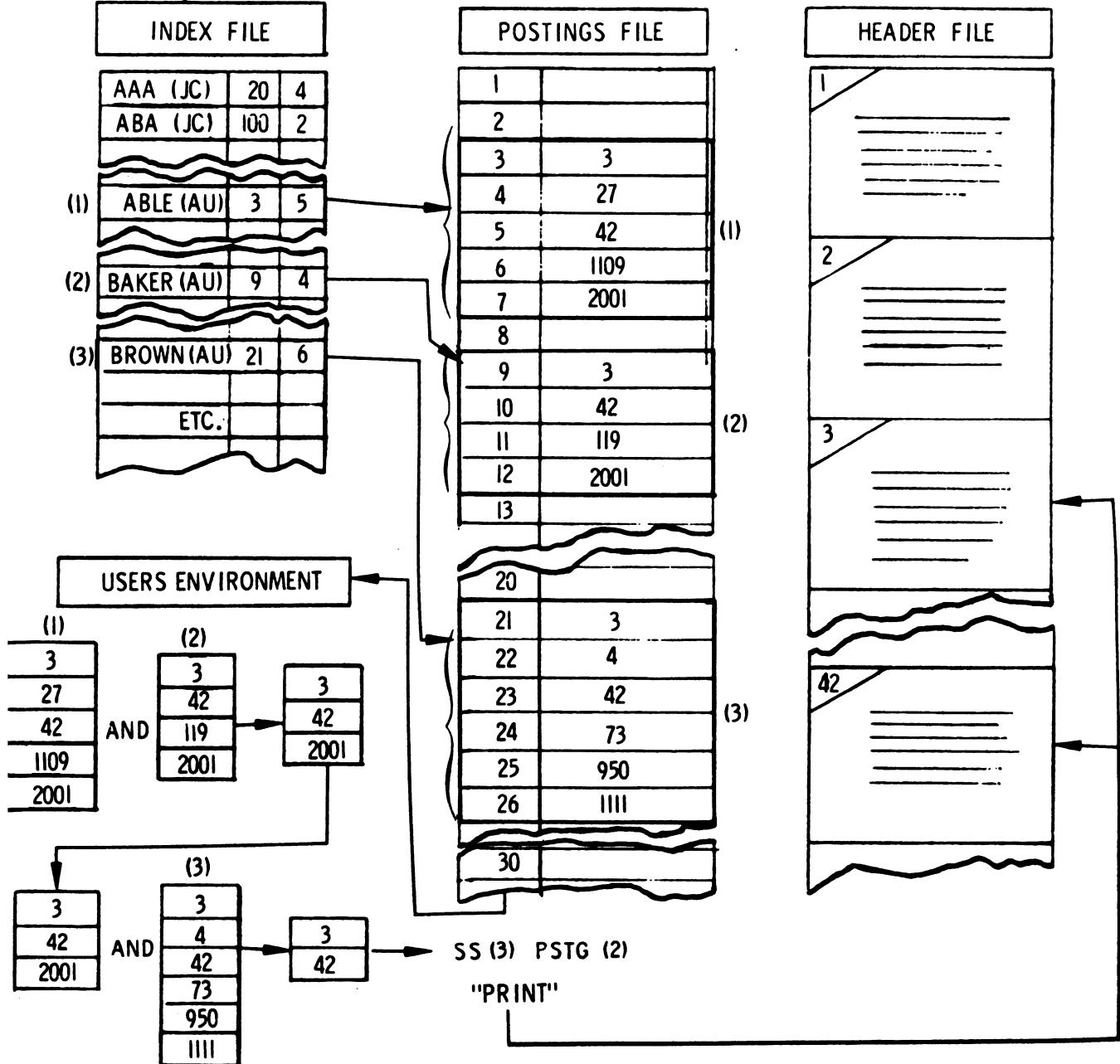
SS 3/C? ABLE J AND BAKER B AND BROWN C

Parser Routine -

-This is a search statement and not a command.
 -There are two AND logical operators.

-There are three search terms:

ABLE
BAKER
BROWN



The only time the header file is searched directly in the ELHILL programs is when the STRINGSEARCH or SENSEARCH capabilities are used. The program scans a subset of the data base for a specific sequence of characters in one field or category of information in each of the unit records corresponding to the list of postings in the subset.

4.3 DATA BASES

The following data bases are currently available and searchable using the ELHILL software:

<u>DATA BASE</u>	<u>NLM</u>	<u>SUNY</u>
AVLINE	Yes	No
BACK66	Yes	Yes
BACK69	Yes	Yes
BACK72	Yes	Yes
BACK75	Yes	Yes
CANCERLIT	Yes	No
CANCERPROJ	Yes	No
CATLINE	Yes	No
CHEMLINE	Yes	Yes
CLINPROT	Yes	No
EPILEPSY	Yes	No
MEDLEARN	Yes	No
MEDLINE	Yes	Yes
MESH VOC	Yes	Yes
NAME AUTH	Yes	No
RTECS	Yes	No
SDILINE	Yes	Yes
SERLINE	Yes	No
TDB	Yes	No
TOXBACK	Yes	No
TOXLINE	Yes	No

4.4 COMMUNICATING WITH THE ELHILL PROGRAMS

The computer system only recognizes user input which follows the USER: cue and is followed by a carriage return. Three types of input are commonly entered by a user:

- 1) Search Statements - searchable items from the Index file, entered alone or in combination with the logical operators AND, OR and AND NOT.
- 2) Commands - instructions to the program requesting operations other than searching, such as a display of citations, changing data files, etc.
- 3) Replies to Questions - users' answers to questions posed by the program; choices of replies are always offered, and answering at all may be avoided by entering any command.

The program communicates with the user only after the PROG: cue and uses three types of messages:

- 1) Program Messages - these guide the flow of user/program interaction, giving the user information or pointing out limitations in the program.

- 2) Response to Search Statements and Commands - a display of citations, manipulation of the user's workspace, etc.
- 3) Questions - information needed by the program in order to continue the interaction; the users' replies confirm or clarify commands.

4.5 SEARCHING

A search consists of terms used to define an area of interest and the strategy used to combine those terms to select a group of logically related records. The following will be concerned with the principles of searching without reference to any specific NLM data base.

A search may consist of a single term from any searchable category of the unit records or of multiple terms combined by means of logical operators. Searches are entered without enclosing punctuation, after the cue:

SS #/C---SEARCH STATEMENT # OR COMMAND?
USER:

and terminated with a carriage return. Only search statements with non-zero retrieval are assigned search statement numbers.

A search term is an element of a unit record which has been placed in the Index file of the data base being searched. For a detailed list of searchable elements in each file, consult the section of this Manual describing the particular file.

4.5.1 INPUT ERRORS

When a typing or transmission error occurs, there are two ways in which a correction may be made:

- 1) Individual Character Deletion - may be done with the backward arrow, backward slash or the underscore, depending upon the type of terminal being used. Each of these characters will "wipe out" the character immediately preceding it. For example, if the user wished to enter the term LIBRARY but typed LIBRR the backward arrow or slash or underscore would be typed immediately following the erroneous R and the user continues to type the word:

LIBRR~~A~~RY

The program will only read the correct letters.

- 2) Line Deletion - an entire line may be deleted with the use of the dollar sign (\$). The program does not read any line ended with that character, but rather repeats the USER: cue.

SS 1/C?
USER:
LIVER NEOPLASSM AND DOGS\$
USER:
LIVER NEOPLASMS AND DOGS

4.5.2 EMBEDDED WORDS

When searching, it is necessary to disguise embedded logical operators contained in some MeSH headings and the abbreviation EXP. For example, if user types:

BONE AND BONES

the system will respond

NP (BONE)
NP (BONES)

The logical AND must be disguised, either by using the variable character symbol, as in A#D, or by preceding the word with one of the following special characters ? : ! ` ^ .

SS 1/C?
USER:
BONE !AND BONES
PROG:
SS (1) PSTG (4241)

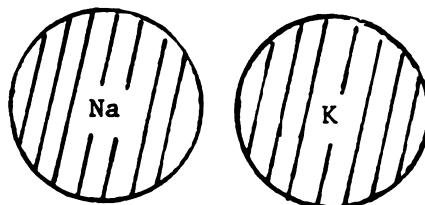
4.5.3 LOGICAL OPERATORS

There are three logical operators available to searchers of the ELHILL data bases: AND, OR and AND NOT. They are used to combine search terms according to the logic of Boolean algebra and can best be explained by means of sample search statements and Venn diagrams in which the shaded portions represent retrieval.

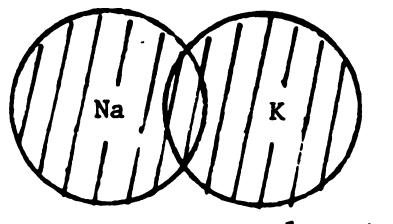
4.5.3.1 THE OR OPERATOR

This retrieves two or more independent sets of unit records which may, but need not, have elements in common. For example:

SS 1/C?
USER: SODIUM OR POTASSIUM



No Common elements



Some common elements

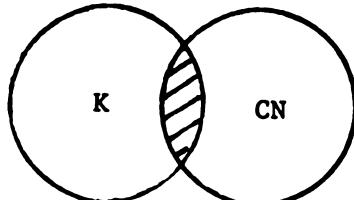
Both of the preceding examples satisfy the OR condition.

4.5.3.2 THE AND OPERATOR

The AND operator retrieves a set of unit records which has elements common to two or more sets of unit records. For example:

SS 1 /C?---SEARCH STATEMENT 1 OR COMMAND?
USER:

POTASSIUM AND CYANIDES



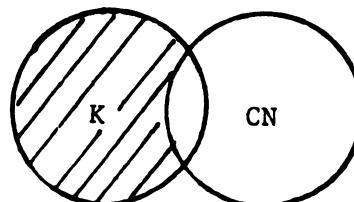
In this example the retrieved unit records consist of all records dealing with both potassium and cyanides. Records dealing with potassium cyanide would also be retrieved since this compound has both elements of the search statement and potassium cyanide as a single search term is not a term used by indexers.

4.5.3.3 THE AND NOT OPERATOR

The AND NOT operator retrieves a set of unit records from which one or more elements have been excluded. For example:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?
USER:

POTASSIUM AND NOT CYANIDES



In this example the search statement retrieves all unit records dealing with potassium except those dealing with both potassium and cyanides. You should be aware of a pitfall inherent in the AND NOT strategy. In the search illustrated above, for example, it would be impossible to exclude only records dealing with potassium cyanide, since records dealing with potassium and cyanides as separate entities would also be excluded.

4.5.3.4 THE "NAND" STRATEGY

A fourth search strategy is possible using a combination of all three of the logical operators. This strategy, which is sometimes referred to as the "nand", retrieves a set of unit records from which a combination of two or more elements has been excluded. For example:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:

SODIUM AND CHLORIDES

PROG:

PSTG---SEARCH STATEMENT (1) NUMBER POSTINGS (1247)

SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:

SODIUM OR CHLORIDES

PROG:

PSTG---SEARCH STATEMENT (2) NUMBER POSTINGS (10425)

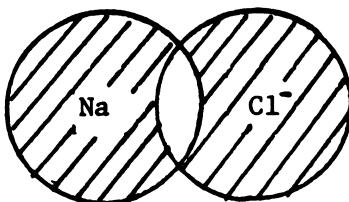
SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?

USER:

2 AND NOT 1

PROG:

PSTG---SEARCH STATEMENT (3) NUMBER POSTINGS (9178)



In this example the last search statement uses the "nesting" technique. Search statement numbers are used in the third search statement to combine the results of the first two search statements. The result is that all unit records dealing with sodium are retrieved and all dealing with chlorides are retrieved, but those dealing with both sodium and chlorides have been excluded. The same pitfall described in the AND NOT strategy applies to this "nand" strategy.

4.5.4 GENERAL SEARCH RESTRICTIONS

The AND operator takes precedence over the OR operator in searching. For example:

WATER OR AIR AND STERILIZATION

retrieves

WATER OR (AIR AND STERILIZATION)

If what is really wanted is

(WATER OR AIR) and STERILIZATION

Note: Parentheses are never actually entered around search terms. These have been added to illustrate the logic of the statements.

then the search statements must be nested as follows:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:

WATER OR AIR

PROG:

PSTG---SEARCH STATEMENT (1) NUMBER POSTINGS (4670)

SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?

USER:

1 AND STERILIZATION

PROG:

PSTG---SEARCH STATEMENT (2) NUMBER POSTINGS (52)

Except in STRINGSEARCH statements, NOT may never be used alone, but must always follow AND. A search statement may never begin with a logical operator. If a search statement is longer than 132 characters (including spaces), or must be continued on a second or subsequent lines, the last entry in each line being continued must be AND or OR. The program will prompt the user for each new line by a continuation cue message. If the line would logically end with AND NOT, the AND is placed at the end of the line and the NOT at the beginning of the next line. For example:

SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?

USER:

SCHIZOPHRENIA OR CATATONIA OR

PROG:

CNT 1---CONTINUE SS 1

USER:

SCHIZOPHRENIA, HEBEPHRENIC OR SCHIZOPHRENIA, LATENT OR

PROG:

CNT 1---CONTINUE SS 1

USER:

SCHIZOPHRENIA, PARANOID OR AUTISM AND

PROG:

CNT 1---CONTINUE SS 1

USER:

NOT CHILD

In the above example, AUTISM is the only search term for which records also dealing with children are not acceptable. The other SCHIZOPHRENIA terms have not been logically combined with AND NOT CHILD.

4.5.5 SPECIAL SEARCH CAPABILITIES

In addition to the straightforward use of search terms alone or connected by the logical operators, there are several special techniques which are available.

Six such special options will be discussed below: category qualifiers, truncation, the variable character symbol, EXPLODE, STRINGSEARCH and SENSEARCH, and ranging.

4.5.5.1 CATEGORY QUALIFIERS

Each unit record data element of each ELHILL data base has a two-letter mnemonic which identifies the element. This is important in searching because a particular term may appear in more than one element. For example, in MEDLINE the term PATHOLOGY is a MeSH heading (MH), a journal title abbreviation (TA), and a text word (TW). To search only one element, the term should be qualified with one of the mnemonics:

SS 1/C?
USER:
PATHOLOGY (TA)

A term entered without a qualifier will be searched in only those elements designated as default elements for a given data base. In MEDLINE, text words are not included in this default set, so that a word that does exist as a text word but not as a MeSH heading, when entered without a qualifier, will generate a NO POSTINGS message. Also, a term entered without a qualifier that exists in more than one default element will generate a MULTI-MEANING message (see the portion of this Section dealing with Program Messages for a complete explanation of the MULTI-MEANING message). A default table for all data bases is included in part 4.13.

A qualifying mnemonic may be placed at the beginning of a group of terms, and will qualify all terms that follow in that statement:

(TW) BATS OR MICE OR RATS

4.5.5.2 TRUNCATION SYMBOL - MULTIPLE VARIABLE CHARACTER SYMBOL

Search terms may be entered in truncated form with the use of the colon (:) as a substitute for any number of characters or spaces. For example:

ALL PROPAN:

will retrieve the terms PROPANE, PROPANES, PROPANEDIOL, etc.

ALL DIMETHYL:SUL:OXIDE

will retrieve the terms DIMETHYL SULFOXIDE, DIMETHYL SULPHOXIDE, DIMETHYLSULFOXIDE and DIMETHYLSULPHOXIDE.

Note that the colon placed in the middle of a term substitutes for no characters as well as any number of characters. The colon is thus very useful in cases of variant spellings. Using the truncation symbol will usually generate a Multi-Meaning Message, because the truncation usually retrieves more than one term from the Index of the retrieval file set. Preceding the truncation with the word ALL will bypass the Multi-Meaning Message, and will cause the program to logically OR together all versions of the truncated term. In addition, a truncated term may retrieve terms

from several data fields. For example:

ALL FISH:

will retrieve main headings and text words beginning with FISH, and also any authors named FISHMAN, FISHBEIN, etc. Specifying the fields to be searched will eliminate this problem:

ALL FISH: (TW)

When searching authors, if the initials used in the AU field of a citation are unknown, leave one space after the surname and enter the colon:

BROWN : (AU)

This will retrieve all authors with the surname BROWN.

4.5.5.3 THE SINGLE VARIABLE CHARACTER SYMBOL

This is a pound sign or hash mark (#). It substitutes for only one character or space, and cannot replace a lack of any character or space. For example:

TUMO#R (TW)

will retrieve the term TUMOUR but not TUMOR. The variable character symbol is most useful for including plurals, as DOG# for either DOG or DOGS, and for disguising embedded ANDs in main headings, as WOUNDS A#D INJURIES. If the AND is not disguised, the program will read each term separately, and the following message will be generated:

NP---NO POSTINGS (WOUNDS)
NP---NO POSTINGS (INJURIES)

4.5.5.4 EXPLOSIONS

ELHILL data bases which use the Medical Subject Headings vocabulary to index citations may be searched using the EXPLODE capability. MeSH terms are published in both an alphabetical listing and in a hierarchical arrangement known as the Medical Subject Headings Tree Structures. In the Tree arrangement the terms are grouped into fifteen broad categories with seven levels within each category. Each term is assigned an alphanumeric MeSH classification or "Tree" number which indicates its position in relation to other terms. (For further discussion of the MeSH publications, consult PART 6 of the Manual.)

The EXPLODE capability automatically ORs together all the terms in a particular "tree". For example:

EXPLODE BENZOFURANS
PROG:
SS (7) PSTG (270)

will retrieve all citations indexed to BENZOFURANS in general, as well as those indexed to any more specific term indented under BENZOFURANS, such as

USNIC ACID. The MeSH classification number itself may also be used for EXPLOSIONS:

EXPLODE D3.438.127
PROG:
SS (8) PSTG (270)

This method is useful when a particular term appears in more than one tree, as EXPLODING just the term itself will generate a Multi-Meaning Message.

MeSH classification numbers may be found while on-line with the "MESHNO command followed by the term. The "TREE command may be used to print out the tree structure surrounding a given term.

The asterisk may be used with an EXPLODED term, to retrieve only citations in which one of the terms in the tree was an Index Medicus heading, that is, a major point of the article:

EXPLODE *CORNEAL DISEASES
PROG:
SS (6) PSTG (1091)

Subheadings may also be attached to EXPLODED terms or classification numbers:

EXPLODE C11.204/SU
PROG:
SS (9) PSTG (96)

The quotation mark is NOT used preceding the EXPLODE instruction.

4.5.5.5 STRINGSEARCH AND SENSEARCH

Character strings within nearly all data elements (except the source and citation identifier) of the unit records of ELHILL data bases may be searched using this capability. First a preliminary search must be performed, either with main headings or text words if subject is the criteria, until the number of postings is fewer than 300. One or more fields may then be scanned for a specific character string not retrievable in any other, more efficient, manner. It is recommended that the user pull ENG (LA), HUMAN (MH) and other highly-posted terms from a subsearch of 300 or fewer citations in the MEDLINE (not SDILINE) database by doing a STRINGSEARCH as follows:

PROG:
SS 1/C?
USER:
DOPA AND DOPAMINE AND METHYLDOPA
PROG:
SS (1) PSTG (11)
SS 2/C?
USER:
TS (MH) : HUMAN : AND : ENG : (LA)
PROG:
SS (2) PSTG (3)

SDILINE should be directly searched for ENG (LA), HUMAN (MH), etc. since it is a comparatively small file.

This use of STRINGSEARCH on-line is time-saving both for the user and the system. If more than 300 citations are to be subset in MEDLINE, TS for English language and for HUMAN (MH) should not be used since direct searching is more economical. In the above example, SS 2 would become:

USER:

1 AND HUMAN (MH) AND ENG (LA)

(note: this will result in time overflows
but will still be faster than STRING-
SEARCHing)

String searching is "time-sliced" by the ELHILL programs. This means that a large number of postings from the preliminary search will be scanned until the period of time allotted to one search statement has elapsed. The program will then store any postings which matched the character string being searched, and will display the following message:

(115) SEARCHED AND (55) QUALIFIED. CONTINUE? (YES/NO)

USER:

The number of postings scanned in one "time-slice" depends on the complexity of the stringsearch statement. The program scans the records from the earliest entry date forward, so the preliminary postings stated in the continuation question represent the oldest citations. The tallies given after each scan are cumulative, and if the user answers NO to the cue, the postings found so far will be retained in a final postings statement. At the end of the scan (if the user has answered YES to each continuation question) a postings statement will result, as for any other search statement.

The stringsearch statement itself has four parts, two of which are optional. The four parts are: the strategy name (STRINGSEARCH or the abbreviation TS), the location (the search statement number and/or a SKIP instruction) (optional), a category qualifier (optional), and the search term enclosed by colons.

- a. Search strategy name - the word STRINGSEARCH or the abbreviation TS begins the statement, without quotation mark.
- b. Search statement number and/or SKIP instruction - OPTIONAL - if no number is specified, the program will perform the stringsearch on the entire retrieval of the most recent search statement having non-zero retrieval. If a search statement number is to be specified, it is entered as a number alone, separated by spaces from the rest of the statement. A SKIP instruction may also be used, which will cause the program to begin the stringsearch at the specified point:

TS 5 SKIP 100 :BETA:

This instruction will cause the program to stringsearch search statement 5 for the string BETA beginning with citation number 101.

- c. Category qualifier - OPTIONAL - if none is used, the program will perform the search in the STRINGSEARCH default field in the data base being searched. The qualifier, enclosed in parentheses, is usually placed before the term to be searched. In this position it will be applied to all following terms in the same statement, except any which are followed by another category qualifier.
For example:

TS (AU) :ALLEN: AND :MEEKS: AND :ANEURYSM: (TI)

will search for articles authored by both Allen and Meeks with the string ANEURYSM in the title.

- d. Terms or strings to be searched - the term is always enclosed in colons. Spaces before or after the colon are very important. They are legitimate characters in STRINGSEARCH and should be taken into account, especially when the term or string being searched may be a root or part of another, unrelated word.

Positioning or omission of the colons is illustrated with the term DOPA below. The examples assume a search of the Title (TI) data element; the same principles apply to stringsearching other data elements as well.

USER: If colons are omitted entirely, a right-hand truncation is assumed. This request would retrieve any title beginning with the string DOPA, e.g., Dopamine.

USER: If spaces are left between the term and the colons, only titles which contain the exact form of the term will be retrieved. This request will retrieve titles containing the word Dopa, but not the words Dopamine or Methyl-dopa or Methyl-dopamine. If the word Dopa is preceded or followed by punctuation which is ignored by the program, the title would still be retrieved using this strategy.

USER: If no spaces are used, the requested term may appear as a separate word or as part of another word. This request will retrieve titles containing Dopa, Dopamine, Methyldopa, or Methyldopamine.

USER: This will retrieve titles containing any word beginning with DOPA, e.g., Dopa, Dopamine.

USER: This will retrieve titles containing any word ending with Dopa, e.g., Dopa, Methyldopa.

USER: If the preceding colon is omitted, then the entire title must begin with the term DOPA, or in this case, words beginning with DOPA.

TS DOPA:

USER: If the following colon is omitted, then the entire title must end with the term DOPA, or in this case, words ending with DOPA.

TS :DOPA

USER: If a colon is placed in the middle of a term then any number of characters and spaces may appear between the two parts of the term including none. This request would retrieve titles containing the term Dopacarboxylase and Dopa Carboxylase. In addition, titles such as "The use of Dopamine, but not Methyl-decarboxylase" would also be retrieved.

TS :DOPA:CARBOXYLASE:

Certain punctuation marks are ignored by the program and treated as spaces in stringsearching. These include commas, periods, apostrophes and quotation marks. All other punctuation (except parentheses) immediately preceding, following, or found within a string must be included as part of the word in stringsearching. In addition, when stringsearching main headings, any commas embedded in the term being searched must be disguised with a hashmark or pound sign (#), e.g. INFANT# NEWBORN.

Punctuation which is ignored may be included or excluded; the string 2,4,5-T could be stringsearched either as : 2 4 5-T: or as : 2,4,5-T: with the same results. However, the hyphen must be included, as it is not ignored by the program. Any right or left parens must be entered as spaces: the string LESION(S) would be entered as : LESION S :

In searching potentially hyphenated words the user should be aware that the use of the hyphen is not consistent in the literature. For example, "by pass", "by-pass" and "bypass" have all been used in referring to intestinal by-pass surgery. You may either substitute a colon for the hyphen (:BY:PASS:) or OR together the various possibilities in the STRINGSEARCH statement (:BY-PASS: OR :BY PASS: OR :BYPASS:).

In addition to searching single terms or strings, it is also possible to stringsearch more than one term by using the logical operators AND, OR and AND NOT or by placing more than one term within the colons. When the logical operators are used to stringsearch more than one term or string in the same data element of the unit records, the terms may appear in any order within that data element. For example: the search

TS :HEAT: AND :LOSS:

would retrieve both of the titles below:

The loss of body heat during strenuous exercise.

Heat as a factor in loss of appetite.

On the other hand, if more than one term is placed within one set of colons, e.g.,

TS :HEAT LOSS:

then those terms must appear in that same order and proximity within the data element. For example, in the above search only titles such as

Heat loss during neonatal operations.

would be retrieved; not those with different phrasings, such as

Loss of body heat during neonatal operations.

There are situations in which terms must appear within a certain order and proximity. For example, to retrieve titles about "heart associations" such as "Community Diet Counseling in a County Heart Association," the search

TS :HEART ASSOCIATION:

would be better than

TS :HEART: AND : ASSOCIATION:

which would retrieve titles such as "The association of heart disease and smoking."

It is possible to use the word NOT in a STRINGSEARCH statement alone as the only logical operator. This strategy will exclude, from the retrieval, records containing a certain word, word fragment or phrase in the field being stringsearched. For example the search statement:

TS NOT :ATYPICAL MYCOBACTERIA:

in MEDLINE will only retrieve citations in which the phrase "atypical mycobacteria" does not appear in the title. In other words, this search would exclude titles with the phrase "atypical mycobacteria."

If a STRINGSEARCH requesting many separate terms must be continued on a second line, end the first line with AND or OR. You will be prompted for each new line with a Continuation Message. If the line would logically end with AND NOT, the AND is placed at the end of the line and the NOT at the beginning of the next line. For example:

SS 3 /C---SEARCH STATEMENT 3 OR COMMAND?

USER:

TS (TI) :HEAT: AND :LOSS: AND

CNT 3---CONTINUE SEARCH SS3

USER:

NOT JONES : (AU)

An individual STRINGSEARCH term must be less than or equal to 39 characters and/or spaces in length. If you try to search a longer term or string, the 40th and succeeding characters will be ignored by the program without any notification.

The SENSEARCH capability is exactly the same as STRINGSEARCH, except that by beginning the statement with the word SENSEARCH or one of its alternate forms (SENTEENCESEARCH, SENS, ABSTRACTSEARCH, or ABSTS), you are asking that all of the terms or strings in the statement be located in one sentence in the specified data element of the unit records. For the purposes of SENSEARCH, a sentence is defined as any string of characters and spaces followed by a period (.) and a space.

Thus, abbreviations with periods followed by spaces in the middle of grammatical sentences will create unnatural sentences and potential retrieval failures in the SENSEARCH capability.

At the present time there is a need to permute phrases and link them with the logical OR in order to retrieve all occurrences. For example, in order to retrieve all occurrences of the words HUMAN and MILK in the same sentence in an abstract the following would be input:

SENS (AB) :MILK:HUMAN: OR :HUMAN:MILK:

Use of the Truncation Symbol (:) and of the logical operators is the same as for STRINGSEARCH.

4.5.5.6 RANGING

Ranging is a search strategy limited to numeric data elements of the unit records which are directly searchable in the Index of the retrieval file set. There are three ranging expressions available:

LESS THAN _____
FROM _____ TO _____
GREATER THAN _____

The numbers from the desired data element within the desired range are inserted in the blank(s) of the appropriate expression. The FROM TO Ranging expression is inclusive but the GREATER THAN and LESS THAN expressions are not. For example:

GREATER THAN 760701 (ED)

will retrieve all records input to the system after July 1, 1976. When entered alone, a Ranging statement will usually cause an overflow condition. Thus, they should be used only in combination with other terms in the search statement, as in the examples below:

ENZYME ACTIVATION AND LESS THAN 770101 (ED)

DRUG ABUSE AND MORPHINE AND FROM 760610 TO 760710 (ED)

ANESTHESIA AND NOT CYCLOPROPANE AND GREATER THAN 770101 (ED)

Ranging frequently results in numerous time overflow messages.

4.6 TEXT WORD TERM GENERATION

As has already been mentioned, the data bases discussed in this Manual all contain a Text Word data element. This element contains words taken from various other data elements of each data base, searchable according to the rules for text word term generation. The program examines each record as it is input to the system and selects candidate terms by following the rules listed below:

- 1) A candidate term is generated for any alphabetic or alphanumeric string of characters up to 36 characters in length.
- 2) Essentially all special characters (commas, periods, slash marks, colons, etc.) are converted to blanks, which serve as term delimiters. That is, a term is a string existing between blanks. An exception for certain uses of the comma is described below under the hyphen.
- 3) The hyphen is not considered a special character when used in the following:
 - a) a term consisting of a numeric string connected to a single alphabetic character by the hyphen, such as 2,4,5-T.
 - b) a term consisting of up to three alphabetic characters followed by a hyphen and a numeric string, such as LD-50 or SKF-525.
- 4) A candidate term which is present on the current STOPWORD list (see Appendix) is discarded. In addition, all-numeric strings are also discarded.

As an example, the following MEDLINE abstract will provide the listed Text Words:

AB - Marked polydipsia and polyuria developed in a 1 1/2-year-old male Abyssinian cat. Diabetes insipidus was suspected, inasmuch as intramuscular vasopressin administration resulted in amelioration of polydipsia and polyuria. However, hypertonic (3%) saline solution given intravenously resulted in anuria, an indication of antidiuretic hormone activity.

Text Words: marked, polydipsia, polyuria, developed, year, old, male, Abyssinian, cat, diabetes, insipidus, suspected, inasmuch, intramuscular, vasopressin, administration, resulted, amelioration, hypertonic, saline, solution, intravenously, anuria, indication, antidiuretic, hormone, activity.

Note that a particular text word is selected only once, although it may appear in the abstract several times.

For further information regarding the generation of the Text Word field, consult the Manual Section dealing with each specific data base.

4.6.1 TEXT WORD SEARCHING

There are several factors to consider when selecting search terms which may be text words:

- 1) Variant spellings - words may be spelled differently depending upon the country of publication of the item. For example, tumor and tumour, sulfur and sulphur, fetus and foetus, and so on. The "NEIGHBOR command is useful in locating variant spellings. The multiple variable character symbol (:) is used to retrieve several spellings simultaneously. For example:

```
SS 1/C?  
USER:  
ALL TUMO:R
```

This will retrieve both forms of the word in one search statement. Note that using the single variable character symbol (#) TUMO#R, will only retrieve TUMOUR, because the # cannot be used to substitute for the absence of any character or space.

- 2) Variant word forms, prefixes and suffixes - The "NEIGHBOR command is extremely valuable in finding variations on a given root word. For example:

```
SS 1/C?  
"NEIGHBOR ABDOMIN (TW)
```

PROG:

POSTINGS	TERM
1	ABDOMINAL
1	ABDOMININS
3963	ABDOMINAL
2	ABDOMINALE
16	ABDOMINALIS

UP N OR DOWN N?

USER:

10

PROG:

POSTINGS	TERM
9	ABDOMINALLY
1	ABDOMINALS
1	ABDOMINALTRANSPIRATIONAL
56	ABDOMINIS
33	ABDOMINO
1	ABDOMINOANAL
1	ABDOMINOCENTESIS
1	ABDOMINOMETRY
1	ABDOMINOPARIETAL
3	ABDOMINOPELVIC

UP N OR DOWN N?

Knowing the possible variations, the searcher may make a decision regarding use of the truncation and variable character symbols. There is no simple way to determine the presence of the root word attached to a prefix. The STRINGSEARCH capability may be used after a suitable subset has been retrieved.

The single variable character symbol (#) is most useful for retrieving a certain word and its plural form only. For example, while CAT: will retrieve both CAT and CATS, it will also retrieve many other terms, CATALOG, CATATONIC, CATARACT and so forth. Entering the word as CAT# will only retrieve CAT and CATS.

When using the variable character symbols, use the instruction ALL preceding the truncated term in order to eliminate the Multi-Meaning message.

- 3) Misspellings - many text words are misspelled, either in the article itself, or in the process of being input to the data base. The "NEIGHBOR command is also extremely useful in finding such misspellings. The command:

```
SS 1/C?  
USER:  
"NEIGHBOR HEMORRHAGE (TW)
```

produces the following list of terms:

POSTINGS	TERM
1	HEMORRHABIC
2215	HEMORRHAGE
11	HEMORRHAGED
2	HEMORRHAGEIC
1	HEMORRHAGEOUS

UP N OR DOWN N?

In addition, however, "NEIGHBOR HEMMORRHAGE (misspelled with two M's) produces:

POSTINGS	TERM
2	HEMMORHAGES (TW)
1	HEMMORHAGIC (TW)
13	HEMMORRHAGE (TW)
1	HEMMORRHAGED (TW)
4	HEMMORRHAGES (TW)

UP N OR DOWN N?

Using the command to "NEIGHBOR the misspelling HEMORRAGE (the second H is omitted) produces:

POSTINGS	TERM
7	HEMORHEOLOGICAL (TW)
4	HEMORHEOLOGY (TW)
11	HEMORRAGE (TW)
2	HEMORRAGES (TW)
1	HEMORRAGHE (TW)

UP N OR DOWN N?

4) **Synonyms** - whereas with indexed searching, such as in MEDLINE, an Indexer has examined each item and assigned subject headings to it, in text word searching the searcher must retrieve only on words actually included in the text word field. Therefore, it is important to use as many synonyms as possible in text word searching. For example, the concept of aging in humans, which has the MeSH check tag AGED, may be referred to by various authors as AGED, AGING, MATURE, SENIOR, ELDERLY, RETIRED or POST MENOPAUSAL. The concept of human, as opposed to animals, can be represented by the words MALE, FEMALE, MEN or MAN, WOMEN or WOMAN, PATIENT or PATIENTS, PEOPLE, PERSON or PERSONS or by the name of a group, such as LABORERS, WORKERS, MOTHERS, FATHERS, etc.

4.7 SEARCHING EFFICIENTLY

It is suggested that searchers examine search requests carefully and identify specific facets to be searched. When a search has been separated into various parts, the appropriate thesaurus or dictionary should be consulted (such as MeSH for MEDLINE and CHEMLINE for TOXLINE). Terms to be used in the search should be collected from these sources, and other, "free-text" terms should be identified. These free-text terms are called Text Words, and are generated from the titles and abstracts of each record (in some data bases other elements are included as well). Once all terms have been collected, the logical relationships between them should be determined, and the searcher should decide which logical operators will be used to combine the various terms. Finally, limitations such as language or year of publication should be noted, so that the retrieval from the concept-search may be adjusted to fit the requestor's specifications.

Redundancy in searching uses unnecessary connect time and may in fact prevent the user from retrieving the desired information at all. There are certain highly posted terms, such as HUMAN and other check tags, which should be used sparingly in searching. A search such as:

- 1) EXPLODE PESTICIDES AND BIRDS
- 2) EXPLODE PESTICIDES AND FISHES
- 3) EXPLODE PESTICIDES AND RATS
- 4) EXPLODE PESTICIDES AND MICE

would be much more efficient as:

- 1) BIRDS OR FISHES OR RATS OR MICE
- 2) 1 AND EXPLODE PESTICIDES

Whether searching with thesaurus terms or with text words, one of the more valuable aspects of on-line searching is the interaction possible between the user and the system. If the searcher only has one or two terms, or even one relevant article within the data base, from which to begin, retrieval and examination of the elements of several records can offer further clues to a

complete retrieval. For instance, if the requestor has found an article in the International Journal of Social Psychiatry on the self-administration of drugs by mental patients, the searcher may retrieve that article and examine the MeSH headings in order to find more citations:

SS 9/C?

USER:

BALLINGER BR (AU) AND INT J SOC PSYCHIATRY(TA)

PROG:

SS (9) PSTG (1)

SS 10/C

USER:

"PRT MH

PROG:

1

MH - ADULT

MH - ALCOHOLISM/OCCURRENCE

MH - AMPHETAMINE/THERAPEUTIC USE

MH - ANALGESICS AND ANTIPIRETICS/THERAPEUTIC USE

MH - CATHARTICS/THERAPEUTIC USE

MH - COFFEE

MH - COMMON COLD/DRUG THERAPY

MH - COUGH/DRUG THERAPY

MH - DRUG ABUSE

MH - DRUG DEPENDENCE

MH - FEMALE

MH - GASTROINTESTINAL DISEASES/DRUG THERAPY

MH - HUMAN

MH - HYPNOTICS AND SEDATIVES/THERAPEUTIC USE

MH - MALE

MH - *SELF MEDICATION

MH - SMOKING/OCCURRENCE

MH - TEA

MH - TRANQUILIZING AGENTS/THERAPEUTIC USE

MH - VITAMINS/THERAPEUTIC use

The searcher thus finds the term SELF MEDICATION, which may then be combined with whichever substances the requestor wishes.

In much the same way, the popular name of a drug may be entered as a text word in order to retrieve citations showing the MeSH heading under which that drug is indexed:

SS 1/C?

USER:

FLAGYL (TW)

SS (1) PSTG (27)

SS 2/C?
USER:
"PRINT 1 MH
PROG:

4
MH - ENGLISH ABSTRACT
MH - FEMALE
MH - HUMAN
MH - METRONIDAZOLE/ADMINISTRATION & DOSAGE/*THERAPEUTIC USE
MH - TABLETS
MH - TRICHOMONAS VAGINITIS/*DRUG THERAPY

4.8 NO POSTINGS MESSAGES

There are various instances in which the NO POSTINGS message may be generated. In any data base, there are default data elements, i.e., those elements which are examined by the system for matching with an entered search term if the term has not been qualified with the mnemonic for a particular element. In MEDLINE, the MeSH headings are searched for unqualified terms. Thus, if the searcher types in COW with no qualifier, a NO POSTINGS message will result because there is no MeSH term COW, although the word does appear as a text word in over 600 records. These records would be retrieved entering the qualified term: COW (TW). The NO POSTINGS message may also be generated with a misspelling:

SS 1/C?
LIVER DISAESES
PROG:
NP (LIVER DISAESES)

There is a MeSH term LIVER DISEASES, which is what the searcher intended to enter. The NO POSTINGS message can also result when the searcher has used the "SUBHEADINGS APPLY" command:

SS 1/C?
USER:
"SUBHEADINGS APPLY DT, TH

PROG:
SUBHEADINGS ACCEPTED
SS 1/C?
USER:
BRAIN OR LIVER OR KIDNEY
PROG:
NP (BRAIN)
NP (LIVER)
NP (KIDNEY)

In this case, none of the entered terms have either of those subheadings attached. When entering MeSH terms with embedded logical operators, if the AND is not disguised, the various parts of the heading will be read as separate words:

SS 1/C?
USER:
BONE AND BONES
PROG:
NP (BONE)
NP (BONES)

The embedded AND should be preceded by a special character (see PART 4.5.2) to disguise it or used with a hash mark (BONE #D BONES):

SS 1/C?
USER:
BONE !AND BONES
PROG:
SS (1) PSTG (5876)

4.9 COMMANDS

Commands are interactions which enable the user to display information, adjust the available workspace, or receive output.

Each command or its abbreviation must be preceded by a quotation mark (").

The commands are discussed below in alphabetical order.

4.9.1 "CAPS COMMAND

This command allows a user with a terminal which is equipped to print citations in both upper and lower case format to print in upper case only. This applies to on-line printing only, not off-line prints or offsearches.

4.9.2 "COMMENT COMMAND

This command enables the user to enter questions or remarks into the system, directly to MEDLARS Management Section at the National Library of Medicine. After entering a "COMMENT command, the user is asked whether or not a reply is desired. If the answer is YES, the program will then prompt for name and address information. The comment is entered line by line, with a prompt from the system: CONTINUE OR TYPE FINISHED-- for each line. At the completion of the comment, the user types FINISHED after the prompt. For example:

USER:
"COMMENT

PROG: (If user replies Yes, the
REPLY? (YES/NO) system asks for a name
USER: and address.)
NO
PROG:
CONT. OR FINISHED-
USER:

(User enters comment lines)

USER:
FINISHED

PROG:
SS 1/C?

4.9.3 "DIAGRAM COMMAND"

This command provides a descriptive printout of the logical structure of all search statements entered during the current search session, or of one specified search statement from the session, or of a stored search. To obtain a diagram of all preceding statements, the user enters the command "DIAGRAM". To specify one search statement, the user enters the number only after the command: "DIAGRAM 5. To diagram a stored search, refer to diagram instructions in PART 5 of this Manual. Here is an example diagram of a search session:

SS 1 /C?
USER:
KIDNEY DISEASES(MH)
PROG:
SS (1) PSTG (4150)

SS 2 /C?
USER:
1 AND ASPIRIN
PROG:
SS (2) PSTG (32)

SS 3 /C?
USER:
"DIAGRAM
PROG:

SEARCH FORMULATION BEGINNING AT SS 2 :
(SS 1:
(KIDNEY DISEASES (MH))
AND ASPIRIN)

NO SUBHEADINGS APPLIED TO ANY SEARCH STATEMENT.

SS 3 /C?

4.9.4 "ELEMENTS COMMAND"

Each data file has a unique set of data elements to which the system will default during a search unless otherwise instructed. For example, in MEDLINE any term entered is searched in the Main Heading (MH) field unless qualified with some other mnemonic, such as text word (TW). Default values for each file are presented in the section of this Manual dealing with that file. The "ELEMENTS" commands offer a means of changing the default values for the duration of a search session in the file to which the user is connected when the command is entered.

The command "ELEMENTS APPLY will cause the program to search only in the field(s) specified in the command for terms entered subsequently. For example, the command "ELEMENTS APPLY TW, TA will cause the system to search the text word and journal title abbreviation fields only; a MeSH heading entered after this command will be searched only in those two fields, and if the term appears in neither, a NO POSTINGS message will result:

SS 5/C?
USER:

"ELEMENTS APPLY TW, TA

PROG:
ELEMENTS ACCEPTED

SS 5/C?
USER:

LIVER NEOPLASMS

PROG:
NO POSTINGS (LIVER NEOPLASMS)

The command "ELEMENTS INCLUDE will add the named fields to those usually searched in a particular file. The command "ELEMENTS EXCLUDE will prevent the program from searching fields usually searched in the file. "ELEMENTS CANCEL or "ELEMENTS ALL will cause the program to search in each field in the data base unit record. "ELEMENTS DEFAULT returns the system to the usual default values for the file.

4.9.5 "ERASEALL and "ERASEBACK OR "BACKUP COMMANDS

"ERASEALL clears all previous search statements, eliminates all stored postings, and returns the user to SS 1/C? It does not erase any instructions from a "RENAME or "VERSION command. After search statements have been erased, they cannot be printed from nor can they be included in subsequent search statements.

SS 5/C?
USER:

"ERASEALL

PROG:
SS 1/C?
USER:

3 AND LIVER DISEASES

PROG:

NP (3)
*NONE-
SS 1/C?

The "ERASEALL command may be used when 25 search statements have been completed and more work space is needed.

"ERASEBACK or "BACKUP is a method of deleting search statements selectively. The command entered by itself will delete the last search statement having postings:

PROG:
SS (20) PSTG (577)
USER:

"ERASEBACK

PROG:
SS 20/C?
USER:

When entered with a number, the "ERASEBACK command will delete all search statements with numbers greater than or equal to the one entered with the command, and place the user at the point of entering the search statement with the same number as the one entered with the command:

PROG:
SS 23/C?
USER:
"ERASEBACK 9

PROG:
SS 9/C?
USER:

Previous search statements may still be entered by number after the "ERASEBACK or "BACKUP command. This command is particularly useful at the end of a search series when the user has received the SF,C (search series full) message, as it allows the user to save some search statements while also gaining more work space

4.9.6 "EXPLAIN COMMAND

The command "EXPLAIN used alone results in an explanation of the last standard program message received by the user:

PROG:
NP (TERATOGENESIS)

SS 2/C?
USER:

"EXPLAIN

PROG:
NO POSTINGS MESSAGE:

NP---NO POSTINGS---THERE ARE NO POSTINGS FOR
THE TERM () EXACTLY AS ENTERED. SEARCH
ABORTED.

THIS IDENTIFIES TERMS IN THE SEARCH STATEMENT WHICH HAVE NO POSTINGS. USE THE NEIGHBOR COMMAND TO CHECK WHETHER YOU MISSPELLED THE TERM OR WHETHER IT DOES NOT EXIST IN THE INDEX.

SS 2/C?
USER:

The command "EXPLAIN _____ with a term inserted after the "EXPLAIN results in an explanation of whatever is inserted. Inserted terms may be any of the following:

- a) Standard commands: COMMENT, DIAGRAM, ELEMENTS, ERASEALL, ERASEBACK, EXPLAIN, FILE, FIND, HELP, MESHNO, NEIGHBOR, NEIGHBORDET, PRINT, RENAME, RESTACK, RESTART, STOP, SUBHEADINGS, TREE, USERS and VERSION.
- b) Program messages: READINESS CUE, LIST SEARCH, CONTINUATION CUE, SEARCH SERIES FULL, DESIGNATE ELEMENTS, CONTINUE PRINTING, CONFIRM RESTART, CONFIRM STOP, NO POSTINGS, MULTI-MEANING, KEYBOARD TERM OVERFLOW, STORED POSTINGS OVERFLOW, POSTINGS, NO MATCH, UP N OR DOWN N, GENERATED TERM OVERFLOW, REPLY, CONTINUE COMMENT, NEXT ORDER, ALL OR NONE, TIME OVERFLOW, POSTINGS PROCESSOR OVERFLOW, and DYNAMIC REJECT.
- c) Other items: UNIT RECORD, OPERATING SUMMARY, LONG SEARCH STATEMENTS, LONG PRINT COMMANDS, VARIABLE CHARACTER KEYS, AND, OR AND NOT, NESTED STATEMENTS, SEARCH TERM QUALIFIERS, DEFAULT MODE, TYPING ERRORS, SUBHEADINGS, COMMANDS, EXPLODE, TIME SLICING, RANGING, SS NUMBERS, PRINT FORMATS, COMPACT, INDENTED, KEYWORDS, and PRINT CATEGORY DESIGNATORS.

In addition, any other message from the program may be entered (up to 23 letters) following the "EXPLAIN command, for example:

USER:
"EXPLAIN TIME OVFLW

PROG:
TIME OVERFLOW
IT IS POSSIBLE FOR A USER TO ENTER A REQUEST THAT REQUIRES SO MUCH PROCESSING THAT IT MUST BE INTERRUPTED TO PERMIT OTHER USERS TO BE SERVICED. THE PARTIALLY-COMPLETED REQUEST IS SAVED, AND THE USER IS GIVEN THE TIME OVERFLOW MESSAGE. IN SUCH A CASE, YOU MAY CANCEL THE REQUEST BY ENTERING THE WORD NO (WHICH, IN THE CASE OF A SEARCH, WILL ABORT IT), OR MAY HAVE IT CONTINUE BY ANSWERING YES.

The complete list of explainable items will be printed by the program when the user enters the "EXPLAIN EXPLAIN command. It should be noted that some items can only be printed out when the user is connected to a data base in which they are valid elements.

4.9.7 "FILE COMMAND

This command allows the user to change from one data base to another. It may be entered any time after the initial program greeting. When the command is given,

the program terminates interaction with the data base that was being searched and enters the new data base, starting with search statement number one.

SS 7/C?

USER:

"FILE TOXLINE

PROG:

YOU ARE NOW CONNECTED TO THE TOXLINE FILE

SS 1/C?

USER:

4.9.8 "FILES COMMAND

This command gives the user the names of all of the ELHILL 3 data bases available to the ID code with which the user logged in. It also tells which data base the user is connected to.

USER:

"FILES

PROG:

YOU MAY ACCESS THE MEDLINE, SDILINE, CATLINE, MESH VOCABULARY, JOURNAL AUTHORITY, NAME AUTHORITY, OLD MESH VOCABULARY, AVLINE, CANCERLINE, CHEMLINE, TOXLINE, TRAFFIC, CANCERPROJ, EPILEPSY, CLINPROT, RTECS AND TOXICOLOGY DATA BANK FILE SETS.

YOU ARE NOW CONNECTED TO THE MEDLINE FILE.

4.9.9 "FIND COMMAND

This command allows the user to enter a search statement as a command, thus eliminating the answer to a question:

UP N OR DOWN N?

USER:

"FIND ULTRASONICS AND RETINAL DETACHMENT

PROG:

SS (4) PSTG (70)

4.9.10 "FINISHED

This command is used to indicate the end of an OFFSEARCH or STORESEARCH formulation.

4.9.11 "HELP

This command may be entered after any USER: cue. It provides for specific alternative actions relative to the user's status with the program. The program first asks what the problem is, then suggests appropriate action:

USER:

"HELP

PROG:

TYPE NUMBER IDENTIFYING YOUR PROBLEM AND CARRIAGE RETURN

1. AM GETTING NP OR NONE MESSAGE: NEED NEW TERMS OR THE FORM OF SOME TERMS.
2. WANT TO SEE SEARCH RESULTS.
3. THE PROGRAM ASKED A QUESTION.
4. NEED TO REVIEW OPERATING FEATURES.
5. NEED TO REVIEW DATA BASE OR UNIT RECORD.
6. WANT NAMES OF COMMANDS.

USER:

3

PROG:

HELP MESSAGE 3:

RESPOND TO REQUEST BY TYPING ONE OF THE CHOICES WITHOUT QUOTE MARKS: (YES/NO); (YES/NO/ALL); A NUMBER OR NUMBERS; OR THE WORD NONE. TO IGNORE REQUEST, STRIKE SPACE BAR AND CARRIAGE RETURN KEY. IF YOU RECEIVED THE SF, C MESSAGE, USE THE "ERASEALL OR "ERASEBACK COMMAND.

FOR MORE, TYPE "EXPLAIN MULTI-MEANING, OR "EXPLAIN ERASEALL OR "EXPLAIN ERASEBACK.

4.9.12 "MESHNO COMMAND

This command is used to find the MeSH classification ("Tree") number or numbers of a MeSH term for use in the EXPLODE capability. MeSH classification numbers are also displayed in the "TREE command.

SS 1/C?

USER:

"MESHNO SKIN NEOPLASMS

PROG:

SKIN NEOPLASMS

C4.588.805

C17.882

The "MESHNO command may also be used to find cross references in the subject headings. For example, slaughterhouses is not a MeSH term, but it is cross referenced in MeSH. Typing the word after the "MESHNO command:

SS 1/C?

USER:

"MESHNO SLAUGHTERHOUSES

PROG:

ABATTOIRS

J1.576.598.256

causes the program to print out the correct MeSH term and its classification number.

To search for a term which appears in the MeSH hierarchy as a Non-MeSH term, the (NON MESH) tag must be added following the term: MESHNO INORGANIC CHEMICALS (NON MESH). As in the TREE command, the truncation symbol (:) or variable character symbol (#) may be used in the MESHNO command. Example:

USER:

MESHNO INORGANIC CHEMICAL:

PROG:

INORGANIC CHEMICALS (NON MESH)

D1

4.9.13 NEIGHBOR COMMANDS

The program will find search terms that are alphabetically identical and/or adjacent to the term or word specified. The term or word may be up to 36 characters long. The program compares character strings from left to right, matching the leftmost character first, and so on. Search terms in the Index are arranged in one continuous listing alphabetically, A to Z, followed by numeric terms arranged decimal, 1 to 9999.

Entering a two-letter category abbreviation in parentheses, e.g., (AU) for Author or (MH) for Main Heading following the term in the NEIGHBOR command causes the program to search in the index for terms from only that particular category of the unit record.

The number of neighboring terms to be displayed can be specified by placing a number, up to 10, after the designated term:

NEIGHBOR BRAIN 10

If no number is specified, the program will default to 5 terms, two above the designated term, and two below it. The number of postings for the term will also be displayed for each:

USER:

PROG:

POSTINGS	TERM
1	BRAIMBRIDGE M (AU)
15	BRAIMBRIDGE MV (AU)
1534	BRAIN (MH)
13666	BRAIN (TW)
191	BRAIN (TA)

UP N OR DOWN N?

USER:

The term in the command may be modified with a two-letter qualifier, for example (MH):

USER:

NEIGHBOR BRAIN (MH)

PROG:

POSTINGS	TERM
667	BRADYCARDIA
686	BRADYKININ
15348	BRAIN
333	BRAIN ABSCESS
2815	BRAIN CHEMISTRY

UP N OR DOWN N?

USER:

in which case each term displayed will be a main heading.

Following the initial index display, the program responds with the UP OR DOWN N? question. To continue the display upward (toward A) enter UP and a number (maximum in either direction is 10). To continue toward Z, type DOWN and a number. Typing the direction with no number will default to 5, and a number without a direction will default to down.

To cancel the NEIGHBOR command, and return to a search statement, enter either a NO, NONE, zero (0), or a space followed by carriage return:

UP N OR DOWN N?

USER:
NO

PROG:
SS 4/C?
USER:

or use a command:

UP N OR DOWN N?

USER:
FIND FOREST (TW)

PROG:
SS (4) PSTG (329)

The NEIGHBORDET command provides a more detailed listing for main headings - it lists each form of the heading: alone, with an asterisk, with each subheading, and with each subheading and an asterisk:

USER:
NEIGHBORDET *HICCUP
PROG:

POSTINGS	TERM
1	HICCUP/PP (MH)
1	HICCUP/TH (MH)
14	*HICCUP (MH)
1	*HICCUP/CI (MH)
5	*HICCUP/CT (MH)

UP N OR DOWN N?

4.9.13a NEWS COMMAND

Use of this command enables a user to receive the general news while logged in to ELHILL. The news is printed out one item at a time, with the most recent item printed first:

USER:
NEWS
PROG:

NEW 12/20/78

A REMINDER - NLM AND SUNY WILL BE DOWN ON DECEMBER 25.

MORE NEWS? (Y/N)
USER:

4.9.14 OFFSEARCH COMMAND

This command initiates an OFFSEARCH.

4.9.15 PRINT COMMANDS

These commands are used to display complete or partial unit records of citations retrieved with search statements. There are three standardized PRINT commands and five flexible command options:

<u>Commands</u>	<u>Options</u>
PRINT	Tailored PRINT
PRINT FULL	Skip
PRINT DETAILED	Search Statement Number Indented or compact format PRINT OFFLINE

Records will be printed 25 lines at a time (including the entire citation which includes the 25th line) and the program will ask if the user wishes a further printout: CONTINUE PRINTING? (Y/N). If the user answers YES, the next set of 25 lines will be printed out. If the user answers NO, the program will return to a search statement. The citations are printed out in reverse chronological order by entry date: those with the most recent entry dates are printed first. The user may specify how many citations are to be printed out:

PRINT 10

4.9.15.1 PRINT

The command PRINT will cause the program to begin printing out the basic data elements for each unit record retrieved in the search statement immediately preceding the command. The specific data elements printed will vary with the data base. A sample from MEDLINE appears as follows:

USER:
PRINT 1

PROG:

1

AU - KROOK L

TI - PERIODONTAL DISEASE IN DOGS AND MAN.

SO - ADV VET SCI COMP MED 20:171-90, 1976

4.9.15.2 PRINT FULL

The command PRINT FULL produces a display of all those printable categories which would be useful to the average user. The specific data elements displayed will vary with the data base. When this command is used, any data element not present in the record will not have a "space" left in its place, nor will the category qualifier for the element be printed. Below is an example from MEDLINE:

USER:

PRINT 1 FULL

PROG:

1

AU - KROOK L

TI - PERIODONTAL DISEASE IN DOGS AND MAN.

LA - ENG

MH - ANIMAL NUTRITION

MH - ANIMAL

MH - BONE RESORPTION

MH - CALCIUM/DEFICIENCY

MH - CALCIUM, DIETARY/ANALYSIS

MH - *DOG DISEASES/ETIOLOGY/OCCURRENCE

MH - DOGS

MH - FOOD ANALYSIS

MH - GINGIVITIS/VETERINARY

MY - HUMAN

MH - HYPERPARATHYROIDISM, SECONDARY/VETERINARY

MH - MILK

MH - NUTRITIONAL REQUIREMENTS

MH - OSTEOLYSIS/VETERINARY

MH - PERIODONTAL DISEASES/ETIOLOGY/OCCURRENCE/*VETERINARY

MH - PHOSPHORUS/DEFICIENCY

MH - UNITED STATES

CI - 0065-3519 20:171 76

SO - ADV VET SCI COMP MED 20:171-90, 1976

4.9.15.3 PRINT DETAILED

The PRINT DETAILED command causes every printable element in the record to be printed out. As with the other formats, specific elements vary with the data base. An example follows:

USER:

PRINT 1 DETAILED

PROG:

1

AU - KROOK L

TI - PERIODONTAL DISEASE IN DOGS AND MAN.

LA - ENG

MH - ANIMAL NUTRITION
MH - ANIMAL
MH - BONE RESORPTION
MH - CALCIUM/DEFICIENCY
MH - CALCIUM, DIETARY/ANALYSIS
MH - *DOG DISEASES/ETIOLOGY/OCCURRENCE
MH - DOGS
MH - FOOD ANALYSIS
MH - GINGIVITIS/VETERINARY
MH - HUMAN
MH - HYPERPARATHYROIDISM, SECONDARY/VETERINARY
MH - MILK
MH - NUTRITIONAL REQUIREMENTS
MH - OSTEOLYSIS/VETERINARY
MH - PERIODONTAL DISEASES/ETIOLOGY/OCCURRENCE/*VETERINARY
MH - PHOSPHORUS/DEFICIENCY
MH - UNITED STATES
ED - 770216
PD - 1976
PL - UNITED STATES
IS - 0065-3519
TA - ADV VET SCI COMP MED
RS - 0:99
RS - I:45
RS - C:29
CN - 77084774
PG - 171-90
SB - M
PN - Z1.107.567.875
RP - DEPARTMENT OF PATHOLOGY, NEW YORK STATE COLLEGE OF VETERINARY
MEDICINE, CORNELL UNIVERSITY, ITHACA, NEW YORK.
VI - 20
JC - 2PR
IM - 7704
CI - 0065-3519 20:171 76
SO - ADV VET SCI COMP MED 20:171-90, 1976

4.9.15.4 TAILORED "PRINT"

The "tailored" "PRINT command is one which indicates specific data elements to be displayed. For example,

"PRINT 5 TI, MH, ED

will result in a listing of the title, main headings, and entry date for the latest five citations retrieved. One may also use the INCLUDE or EXCLUDE capabilities to specify data elements. For example, "PRINT INCLUDE MH will display the basic elements for the "PRINT command plus the main headings. In like manner, the command "PRINT FULL EXCLUDE CI will display all elements given "PRINT FULL except the citation identifier. If a "PRINT command is to be enter using more than one line, the INCLUDE must be used (see Designate Elements Message in the Program Messages Section).

4.9.15.5 SKIP

The SKIP feature instructs the program to print out only selected citations fro

hose retrieved. The command is entered "PRINT SKIP 5 to print out citations starting with number 6; the command "PRINT 5 SKIP 10 will cause the program to print out five citations beginning with number 11. This feature allows the user to browse the citations, or to single out selected items for more detailed print-out.

.9.15.6 SEARCH STATEMENT NUMBER

use of the search statement number in the "PRINT command enables the user to print citations from any previous search statement in the present search series. The number must follow SS and a space: "PRINT 5 SS 7.

.9.15.7 COMPACT OR INDENTED

he program defaults to a compact print format if none is specified, using abbreviations for the data element names. In the Indented format, the names are spelled out:

USER:

"PRINT 1 INDENTED

PROG:

1

AUTHOR EVANS JM
TITLE THE VETERINARY USES OF PROGESTAGENS
SOURCE NZ VET J 24 (3):25-34, MAR 76

.9.15.8 "PRINT OFFLINE

PRINT OFFLINE is a command which will generate a request by the program for mailing information. It indicates that the user wishes the output from the previous search statement printed out at the central computer, instead of the local terminal, and sent in the mail. Up to 300 citations may be printed in one offline print command. If more than 300 are requested, the message:

LIMIT OF 300 DOCUMENTS FOR OFF-LINE PRINT, COMMAND DELETED

will be received. The following is a sample off-line print procedure:

SS (5) PSTG (112)

SS 6/C?

USER:

"PRINT FULL OFF-LINE

PROG:

NAME?

(The user enters the name of the person to whom the printout should be mailed)

USER:
GRACE MCCARN

PROG:
ADDRESS?

USER:
8600 ROCKVILLE PIKE

(The user enters the street add and office or building number, making sure that the local pos office and carriers will have enough information for deliver

PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE) AND ZIP--

USER:
BETHESDA, MARYLAND 20014

PROG:
REQUESTOR'S NAME OR SAME

USER:
SAME

PROG:
TITLE, OR NONE?

USER:
WOMEN IN HEALTH PROFESSIONS

PROG:

PROG:
OK? (Y/N/C)

USER:
YES

PROG:

OFF-LINE PRINT COMPLETED

(The user enters the name of th person requesting the search; if it is the person to whom th search is addressed type SAME)

(Use of a unique title for each search greatly expedites the separation and prompt receipt of off-line printout)

(The program asks if the inform is correct. If the user answe NO, the program returns to the NAME? prompt. If the user ans CANCEL, the program returns to a search statement)

Entering a space and carriage return after any USER: cue during the request for address information or entering the command "CANCEL will cause the program to cancel the off-line print request and return the user to a search statement. The user will be notified with the OFF-LINE PRINT HAS BEEN CANCELLED message.

4.9.15.8.1 PRESPECIFICATION IN OFF-LINE PRINTS

ELHILL3 has the capability for prespecifying user-supplied information and for overriding information previously specified. The following is a list of key-words representing the elements which may be prespecified and/or corrected when inputting information for printing citations off-line:

NAME
ADDRESS

CITSTAZIP
REQUESTER
TITLE

respecification may also be accomplished in OFFSEARCH. See PART 5.5 for FFSEARCH prespecification information.

"Prespecification" means inputting the answer to a program query before it is sked. For instance, when the user enters a "PRINT OFF-LINE command and the program responds with NAME?, the user may enter as much of his address information s will fit on a line:

PROG:
NAME?
USER:

JANE DOE, ADDRESS = 718 MAIN STREET

PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-
USER:

BETHESDA, MARYLAND 20014

REQUESTER = SAME

TITLE = NEOPLASMS SDI

NAME, ADDRESS, CITSTAZIP, REQUESTER, and TITLE are keywords which stand for the program queries:

NAME?
ADDRESS?
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-
REQUESTER'S NAME OR SAME
SEARCH TITLE OR NONE

Note that each keyword is followed by a space, an equals sign (=), another space and the desired value. More than one such expression may be entered on a line by following each with a comma and a space. Prespecification may not be continued on a second line.

In addition to their use as prespecifications, these keywords may also be used to correct a line of the information after the carriage return has been given. For instance:

PROG:
ADDRESS?
USER:

718 MAIN STREET

PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-
USER:

ADDRESS = 712 EASTERN AVENUE

The program will accept the corrected address and repeat the query which was not answered.

Prespecification is necessary to change a stored address (if it is in effect at your institution) for particular off-line prints.

4.9.16 "PURGESEARCH COMMAND

This command is used to remove a user's STORESEARCH from the system. The search will be removed during overnight processing the evening of the day the "PURGESEARCH command is entered.

4.9.17 "RENAME COMMAND

This command allows the user to rename any command name, command name abbreviation, or logical operator. The term substituted may be any symbol or word not already used as one of those three types of terms. The substitution is only in effect on this terminal during this search session. The "RENAME command may be cancelled by renaming the term back to its default name, using the "RESTART command, or logging off. For example:

"RENAME AND TO +
PROG:
'AND' HAS NOW BEEN RENAMED TO '+'.

SS 7/C?
USER:

WOUNDS AND INJURIES + FIRST AID
PROG:
SS (7) PSTG (90)

SS 8/C?
USER:

Note that it is no longer necessary to disguise the "and" in the MeSH heading WOUNDS AND INJURIES after renaming the Boolean AND to +.

4.9.18 "RESTACK COMMAND (The word KEEP may be substituted for RESTACK.)

This command is related to the "ERASEALL and "ERASEBACK commands. It is used to create more space in the active workspace, but differs from those two commands in that it is used to save search statements selectively and delete unwanted ones. The command may be used at any time, but is particularly useful when the search series full (SF,C) message is received and several statements need to be saved. The command may be entered in one of three ways:

Use the command alone - "RESTACK

(Takes the most recent search statement and puts it at number 1 of a new series - all other statements are lost)

Enter a search statement number after the command - "RESTACK 7,8

(Retains those statements mentioned, in this case 7 and 8, and puts them at numbers 1 and 2 of a new series - all other statements are lost)

Enter the command with word TO and a number - "RESTACK TO 5 or - "RESTACK 15, 16, 17 TO 5

(Places the last statement, or more if specified, in a new series beginning at the number mentioned. Statements up to that number have been retained and can be used for further searching)

In the following chart, the user has just completed SS 7 :

COMMAND ENTERED	RESULT	PROGRAM RESPONSE
"RESTACK"	SS 1,2,3,4,5,6 are erased; SS 7 becomes SS 1.	SS 2 /C? USER:
"RESTACK 4,7" (or "RESTACK 7,4")*	SS 1,2,3,5,6 are erased; SS 4 becomes SS 1 and SS 7 becomes SS 2.	SS 3 /C? USER:
"RESTACK TO 4"	SS 1,2,3 are retained; SS 5 and 6 are erased; SS 7 becomes SS 4.	SS 5 /C? USER:
"RESTACK 5,7 TO 2" (or "RESTACK 7,5 TO 2")**	SS 1 is retained; SS 2,3,4,6 are erased; SS 5 becomes SS 2 and SS 7 becomes SS 3.	SS 4 /C? USER:
"RESTACK 5 TO 7"	(Error Message) You cannot renumber a lower SS to a higher SS!	SS 8 /C? USER:

Note that the program ignores the order of the numbers entered and renames the smaller SS number (4) to SS 1 and the larger number (7) to SS 2.

The numbers entered before the word TO are ordered by the program from smallest to largest, and SS numbers are assigned in sequence, beginning with the number entered after the word TO.

4.9.19 "RESTART COMMAND"

This command, like "ERASEALL, deletes all search statements in the present series, and in addition, cancels all special instructions such as "SUBHEADINGS APPLY, "RENAME, etc. The command returns the user to the greeting message at the entrance to the file being accessed. Before acting on the "RESTART command, the program asks for confirmation:

USER:
"RESTART

PROG:
DO YOU WISH TO RESTART? (Y/N)

USER:
YES

PROG:
HELLO FROM ELHILL 3....

4.9.20 "STOP COMMAND"

This command signals the program that the user wishes to be disconnected from the system.

USER:

"STOP

TIME 0:18:32 NLM TIME 13:26:57

PROG:
DONE? (YES/NO)

USER:
YES

PROG:
GOODBYE!

If the user replies NO to the DONE? question, the program will return to the point in the session at which the user typed "STOP.

4.9.21 "STORESEARCH COMMAND"

This command begins the process of storing a user's search. See PART 5 for detailed instructions.

4.9.22 "SUBHEADINGS COMMANDS"

Subheadings may be specified in search statements in three ways:

- a) Applied to individual main headings - LIVER NEOPLASMS/etiology or LIVER NEOPLASMS/et
- b) Combined with retrieval using the two-letter abbreviation for the subheading and (SH) - 2 AND ME (SH)
- c) Using "SUBHEADINGS APPLY command

The command applies one or more subheadings to all search statements following the command which include terms which are main headings, including exploded terms or classification numbers. This process continues until a "SUBHEADINGS CANCEL or a new set of "SUBHEADINGS APPLY specifications is entered. The subheadings to be applied may be entered either in full or abbreviated form, and must be separated by commas. The comma acts as the logical OR. If the subheadings are to be entered on more than one line, each line except the last must end with a comma:

"SUBHEADINGS APPLY ME, PH, AN, CY, PP,

PROG:
CONTINUE SUBS-

USER:
PA, IR

PROG:
"SUBHEADINGS ACCEPTED

SS 3/C?
USER:

It is well to remember that the "SUBHEADINGS APPLY remains in effect until it is cancelled by the "SUBHEADINGS CANCEL or another "SUBHEADINGS APPLY command or the "RESTART or "ERASEALL command or changing files. "ERASEBACK and "RESTACK do NOT cancel the "SUBHEADINGS APPLY command.

There are two types of search statements which are not affected by the "SUBHEADINGS APPLY command: those which do not include any main headings, and those which consist of numbers of previous search statements. The "SUBHEADINGS APPLY command will not apply the subheadings to earlier statements by number.

The "SUBHEADINGS DISPLAY command may be used to indicate what subheadings are currently being applied:

USER:
"SUBHEADINGS DISPLAY

PROG:
SUBHEADINGS APPLIED PRESENTLY:
PHYSIOLOGY, METABOLISM

**SUBHEADINGS,
SEARCHING
MULTIPLE
(Manual IV-3)**

If subheadings are searched in the format MAIN HEADING/ SUBHEADING only one subheading may be "slashed" with each main heading. If you try to attach more than one subheading to a main heading, you will not receive an error message, but the postings will reflect only the first subheading. For example:

SS 1 /C?

USER:

ASPIRIN/AE/PO/TO

PROG:

SS (1) PSTG (324)

SS 2 /C?

USER:

ASPIRIN/AE

PROG:

SS (2) PSTG (324)

If you wish to search several subheadings without repeating the main heading, use the "SUBS APPLY command.

**TELENET,
SEARCH COUNT (@@)
(Manual II)**

REMINDER: Users accessing the NLM and SUNY data bases via TELENET must enter two at symbols (@@) and a carriage return after a USER: cue to denote a completed search. If only one at symbol is entered, the searcher will be taken out of ELHILL and placed back in the TELENET network command mode. If this happens, and you receive the message TELENET followed by the @ symbol type in CONT followed by a carriage return, and you will be returned to the point at which you were searching.

**TREE ALL
COMMAND,
INOPERABLE
(Manual III-45)**

The "TREE ALL command which enables the user to display multiple MeSH Tree Structure segments on-line for a given term is currently inoperable. Users will be notified when this capability is reinstated.

**ON-LINE SERVICES
REFERENCE MANUAL,
MARCH 1976 UPDATE
AND INDEX**

One copy of the second update (March 1976) to the On-Line Services Reference Manual was mailed to each MEDLINE and TOXLINE center on June 4, 1976. The sections on CATLINE, TOXLINE, and CHEMLINE have been rewritten. New sections on AVLNE, CANCERPROJ and EPILEPSY are also included, and the index has been updated. Additional copies may be purchased from NTIS.

Accession Number: PB-253-417

Title: On-Line Services Reference Manual, Update-II
(March 1976)

Price: \$6.00 (\$2.25 microfiche)

4.9.23 "TIME COMMAND

This command displays the cumulative search or connect time and the system connected to along with the current Eastern Standard Time.

```
SS 2 /C?  
USER:  
"TIME  
TIME 0:00:58      NLM TIME 14:25:39  
USER.
```

4.9.24 "TREE COMMAND

This command displays the hierarchical position of the specified term within the MeSH Tree Structures by printing the more general term under which the requested term is indented, the term itself, any subordinate term(s), and any MeSH "see related" cross references, as well as the MeSH classification number of each term listed. An asterisk following a term indicates that there are more subordinate terms indented under the asterisked term:

```
USER:  
"TREE GENETIC TECHNICS  
  
PROG:  
  
MISCELLANEOUS TECHNICS (NON MESH)      E5  
  GENETIC TECHNICS E5.393  
    CHROMOSOME MAPPING E5.393.183  
    CROSSES, GENETIC E5.393.281 (*)  
    GENETIC INTERVENTION E5.393.420 (*)  
    KARYOTYPING E5.393.500  
    PEDIGREE E5.393.673  
    SEX DETERMINATION E5.393.830
```

If a minor descriptor (the left-hand side of a "see" cross reference) is entered in a "TREE command, the program will display the preferred MeSH term and its Tree structure instead:

```
USER:  
"TREE SLAUGHTERHOUSES  
  
PROG:  
  
MEAT-PACKING INDUSTRY J1.576.598  
  ABATTOIRS J1.576.598.256
```

In some cases a term may be assigned to more than one MeSH category or may appear in more than one position in the same category. When this occurs, the program responds with a Multi-Meaning message which shows the classification numbers assigned to the term. The user may then specify which tree is to be displayed, or display all trees, or cancel the request with the word NONE:

```
"TREE LIVER NEOPLASMS  
PROG:  
MM (LIVER NEOPLASMS) (2)  
  1  C4.588.274.623  
  2  C6.552.697  
SPECIFY NUMBERS, ALL, OR, NONE-
```

USER:

ALL

PROG:

DIGESTIVE SYSTEM NEOPLASMS (NON MESH) C4.588.274
LIVER NEOPLASMS C4.588.274.623

LIVER DISEASES C6.552
LIVER NEOPLASMS C6.552.697

Every term used with a "TREE command should be typed as it appears in MeSH, that is, with commas, hyphens, and apostrophes. If the term is a non-MeSH term, the (NON MESH) tag should also be included in the command, for example: "TREE AMINO ACIDS, CYCLIC (NON MESH). However, if the form of the term is not known, the term may be truncated within the command: "TREE AMINO ACIDS, CYC:

4.9.25 "USERS COMMAND

This command is used to obtain the number of on-line users interacting with the ELHILL programs at a specific time. This information is helpful in determining the speed at which searches are likely to be processed.

USER:

"USERS

PROG:

14 USERS LOGGED IN PRESENTLY

4.9.26 "VERSION COMMAND

This command is used to change the length of either one or all standard program messages. The word "VERSION" is followed by LONG, SHORT, or SYMBOLIC, indicating the length of the message. The three versions are illustrated below:

Symbolic - SS 6/C?

Short - SS 6/C?---SEARCH STATEMENT 6 OR COMMAND?

Long - SS 6/C?---SEARCH STATEMENT 6 OR COMMAND? ENTER SEARCH STATEMENT 6 OR ANY COMMAND.

The user may specify that ALL of the messages are to be printed in the named version type, or may list the first two or more letters of the symbolic form for the message for which the user wishes to change the version type. "VERSION" may be cancelled by another "VERSION command, by entering a "RESTART command, or by logging off.

To change all program messages:

"VERSION SYMBOLIC ALL or

"VERSION SHORT ALL or

"VERSION LONG ALL

To change the version of only one program message:

"VERSION SYMBOLIC SS (Changes the search statement readiness cue to symbolic version)

4.9.27 TABLE OF ELHILL COMMANDS

The following is an alphabetical list of ELHILL commands followed by abbreviation(s) where available and brief descriptions:

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"CAPS	None	Allows a user with an upper/lower case printing terminal to print on-line in upper case only.
"COMMENT	None	Allows user to submit messages on-line to MEDLARS Management Section at NLM.
"DIAGRAM	"DIAG	Provides user with a descriptive printout of the logical structure of either all completed search statements or a specified search or STORESEARCH.
"ELEMENTS	None	Allows user to specify which data elements are to be searched for a given search term.
"ERASEALL	"ERSLL	Erases all completed search statements and returns user to SS 1/C?
"ERASEBACK	"ERASEBAK or "ERSBK "BACKUP	Erases either the last completed search or cancels all search statements back to the search statement number designated in the command.
"EXPLAIN	"EX or "?"	Explains the last program message received by the user or any command program message, or operating procedure specified in the command.
"FILE	None	Allows user to end interaction with one data base and change over to another.
"FILES	None	Allows user to see all available data base names.
"FIND	"FD	Allows user to enter a search statement in the form of a command in order to by-pass other program dialog.

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"FINISHED	None	Indicates the end of OFFSEARCH or STORESEARCH formulation.
"HELP	None	Provides assistance to the user for a variety of problems encountered in searching or responding to the program.
"KEEP (see "RESTACK)		
"MESHNO	"MNO	Displays the MeSH classification number for an entered term.
"NEIGHBOR	"NBR	Displays search terms that are alphabetically adjacent to the entered term and the number of postings for each term in the Index of the Retrieval File Set.
"NEIGHBORDET	"NBRDET	When used with a main heading, it lists each form of the heading: alone, with an asterisk, with each subheading, and with each subheading and an asterisk.
"NEWS	None	Allows user to access the general news file while connected to ELHILL.
"OFFSEARCH	None	Initiates the OFFSEARCH process.
"PRINT	"PRT	Displays results of a search. User may specify categories of information from the unit record or various other standard or tailored options.
"PURGESEARCH	None	Removes a STORESEARCH.
"RENAME	"RNM	Allows user to change the name of any command, command abbreviation, logical operator, or element in the "VERSION and "PRINT commands.
"RESTACK	"RSTK "KEEP	Allows user to save and delete completed search statements selectively.
"RESTART	"RST	Erases all search statements and any special instructions given to the program (i.e., "RENAME or "VERSION commands) and returns user to the program greeting.

<u>COMMAND</u>	<u>ABBREVIATION</u>	<u>FUNCTION</u>
"STOP	None	Signals the program to disconnect the user from the computer.
"STORESEARCH	None	Initiates the STORESEARCH process.
"SUBHEADINGS APPLY	"SUBS APPLY	Allows user to automatically apply a subheading or subheadings to all main headings in following search statements.
"TIME	None	Displays the cumulative search or connect time and the system connected to along with the current Eastern Standard time of day.
"TREE	None	Displays the hierarchical position of a MeSH heading in the Tree structures and gives the MeSH classification number for each term in the display.
"USERS	None	Displays the number of on-line users interacting with the program at the time the command is entered
"VERSION	"VERS	Allows user to change the length of one or more program messages.

4.10 PROGRAM MESSAGES

Program messages either guide the flow of the user/computer dialog or contain responses to search statements or commands. Messages are displayed in one of three forms: symbolic, short or long (see the "VERSION command). After the first part of the login procedure, the user automatically indicates a preference for either the short or symbolic form with the response to the question:

ARE YOU AN EXPERIENCED USER? (Y/N)

The YES answer results in messages being received in the symbolic form; the NO answer results in the short form. The form may also be changed using the "VERSION command.

Detailed descriptions of the program messages and specific examples of their application follow:

4.10.1 READINESS CUE MESSAGE SS #/C---SEARCH STATEMENT # OR COMMAND?

This is the most frequently received message. It indicates that the program is ready for the next entry - either a search statement or a command - and gives the number of the next search statement. This number increases by one each time a search statement retrieves citations:

SS 1/C?

USER:

QUEYRAT (TW)

PROG:

SS (1) PSTG (5)

SS 2/C?

USER:

1 AND BRAIN

PROG:

*NONE-

SS 2/C?

USER:

4.10.2 NUMBER OF POSTINGS MESSAGE

PSTG as in SS (4) PSTG (567)

This message is followed by a number in parentheses that indicates the number of records in the data base that match the search statement just entered. A "PRINT command will display unit records, or portions of them, on or off-line, or the search statement number may be linked with new terms or other search statement numbers (see Nesting).

4.10.3 NO POSTINGS MESSAGE

NP (term as entered)

This message indicates that no unit records in the data base have been found by the program having the term entered within the record field(s) searched. If a record has the word BRAIN in the textword (TW) field but BRAIN was only entered as a main heading, a NO POSTINGS message will result. Frequently, a NO POSTINGS message indicates a misspelling by the user. A NO POSTINGS message may also result when subheadings have been applied to search statements using the "SUBHEADINGS APPLY command, and no main headings with the specified subheadings are searched.

If a term which retrieves postings is ANDed in a single search statement with a term for which there are no postings, a NO POSTINGS message will result and no retrieval will be saved:

SS 1/C?

USER:

LIVER NEOPLASMS AND PATASSIUM

(potassium is misspelled)

PROG:

NP (PATASSIUM)

*NONE-

SS 1/C?

If a term which retrieves citations is ORed in a single search statement with a term for which there are no postings, a NO POSTINGS message will be generated only for the term with no retrieval:

SS 1/C?

USER:

PATASSIUM ISOTOPES OR SODIUM ISOTOPES

PROG:

NP (PATASSIUM ISOTOPES)

SS (1) PSTG (123)

SS 2/C?

The retrieval for SODIUM ISOTOPES listed in SS 2 may be nested in later search statements, just as for any other postings.

4.10.4 NONE, NO MATCH MESSAGE *NONE

This message appears when there are no records having each term connected by the AND logical operator, generating a NO MATCH condition and a NONE message.

USER:

12 AND 13

PROG:

*NONE-

SS 14 /C?

USER:

4.10.5 (N) SEARCHED, (N) QUALIFIED MESSAGE (#) SEARCHED (#) QUALIFIED. CONTINUE? (Y/N)

This message appears during a STRINGSEARCH or SENSEARCH after the first group of postings has been examined. The message will reappear at intervals during the search until all the postings have been examined; the N's in each message are cumulative, with the final result appearing as a conventional postings message:

SS 5/C?

USER:

TS (TI) :CU-7:

PROG:

(156) SEARCHED (25) QUALIFIED. CONTINUE? (Y/N)

USER:

YES

PROG:

(277) SEARCHED (48) QUALIFIED. CONTINUE? (Y/N)

USER:

YES

SS (5) PSTG (66)

When the user responds to the continuation cue with NO, the program stops all further searching, but does save citations already retrieved in a search statement:

SS 8/C?

USER:

TS (TI) :2,4,5-T:

PROG:

(143) SEARCHED (6) QUALIFIED. CONTINUE? (Y/N)

USER:

NO

SS (8) PSTG (6)

4.10.6 MULTI-MEANING MESSAGE MM (term as entered) (number of meanings)

This message indicates that an entered term has more than one "meaning" in the data base. It may indicate that a term used in the EXplode strategy has more than one MeSH classification number (appears in more than one tree), or that a truncated term has several different endings:

USER:

DOPA:

PROG:

MM (DOPA) (5)

- 1 DOPA (MH)
- 2 DOPA DECARBOXYLASE (MH)
- 3 DOPA OXIDASE (MH)
- 4 DOPAMINE (MH)
- 5 DOPAMINE BETA-HYDROXYLASE (MH)

SPECIFY NUMBERS, ALL OR NONE-

USER:

ALL

PROG:

SS (1) PSTG (4880)

If a term has more than 10 meanings the user receives a multi-meaning statement and the ALL or NONE question, but the meanings are not listed:

USER:

GENE:

MM (GENE:) (84)

ALL OR NONE?

USER:

ALL

PROG:

SS (1) PSTG (16,268)

The multi-meaning message will also result from a "TREE command or EXPLODE instruction when the MeSH term entered appears in more than one tree structure:

SS 2/C?

USER:

EXPLODE ETHNIC GROUPS

PROG:

MM (ETHNIC GROUPS) (4)

1 I1.76.201.450.416

2 I1.880.143.522

3 M1.194

4 N1.224.317

4.10.7 CONTINUATION CUE CNT (number of search statement)

This message signals the user to continue a search statement on the next line if a line of search terms has been ended with the AND or OR:

SS 6/C?

USER:

DOGS OR DOG DISEASES OR CATS OR

PROG:

CNT 6

USER:

CAT DISEASES OR CANINE (TW) OR FELINE (TW) OR

PROG:

CNT 6

USER:

CANINE HERPESVIRUS OR DISTEMPER VIRUS, CANINE

PROG:

SS (6) PSTG (33781)

4.10.8 CONTINUE PRINTING? MESSAGE CONTINUE PRINTING? (YES/NO)

This message occurs in several situations in which the number of records or lines available for display is greater than the number allowed. Although a user may specify any number of unit records in a "PRINT command, the program interrupts the on-line printout after every 25 lines (the record containing the 25th line is printed out completely) and asks if the user wishes to continue the printout. This acts as a safeguard, or stopping-place, for users who do not wish to have further citations printed out. The message also appears in other situations in which long displays are involved. For example, the description of the unit record given after an "EXPLAIN UNIT RECORD command will be interrupted after every 25 lines with the continuation question.

If the user wishes to continue, YES (or Y) is entered after the USER: cue following the question. If the user wishes to stop the printout, NO (or N)

is entered. As with all program questions, any answer may be avoided by entering a command.

4.10.9 CONTINUE SUBHEADINGS MESSAGE CONTINUE SUBS-

If a large number of subheadings is to be used in a SUBHEADINGS APPLY command, and they must be continued on another line, the previous line must end with a comma (,) or the logical operator OR. The program will prompt for the next line with CONTINUE SUBS- followed by a USER: cue. More subheadings or any command may be entered at the cue. When a command is entered, the subheadings in the previous line(s) will be accepted.

4.10.10 DESIGNATE ELEMENTS MESSAGE DESIGNATE

This is the programs response to a long "PRINT command in which elements to be printed are being specified by the user. All special instructions to be used in the "PRINT command except data elements to be printed or excluded must be entered on the first line:

SS 8/C?

USER:

"PRINT 10 SS 5 SKIP 15 OFFLINE INCLUDE

PROG:

DESIGNATE

USER:

MH, AB

4.10.11 UP N OR DOWN N MESSAGE

This message appears automatically at the end of the display of terms from a "NEIGHBOR or "NEIGHBORDET command. It allows the user to continue the display upward or downward through the alphabetical listing. The maximum number that may be requested is 10. If the words are used (UP or DOWN) but no number is entered, the program defaults to 5. If only a number is entered, the program defaults to down. If no further display is desired, enter NO, NONE, a zero (0) or any command. For example, see the "NEIGHBOR command portion of this Section.

4.10.12 CONFIRM "RESTART MESSAGE DO YOU WISH TO RESTART? (YES/NO)

Because the "RESTART command deletes all records of your interactions with the program, the program requests confirmation of that command. If the user enters YES, the program returns to the greeting message received when logging in. If the user types NO, the program continues with the next search statement cue. For example, see the "RESTART Command portion of this section.

4.10.13 CONFIRM "STOP MESSAGE DONE? (YES/NO)

Before disconnecting the user from the system, the program requests confirmation of the "STOP command. A YES reply by the user generates a GOODBYE! from the system, and the user is disconnected. A NO reply returns the user to the next search statement. For example, see the "STOP command portion of this section.

4.10.14 SEARCH SERIES FULL MESSAGE

SF,C

This message indicates that the user has used 25 search statements, and must "erase" some of them to make more work-space available. This may be done with the "RESTART", "ERASEALL", "ERASEBACK", or "RESTACK commands. Any other command ("PRINT", "NEIGHBOR, etc.) may be used except the "FIND command, which is really a search statement.

4.10.15 OFF-LINE PRINT DELETED MESSAGE

LIMIT OF 300 DOCUMENTS FOR OFF-LINE
PRINT---COMMAND DELETED

This message appears when the user requests the program to print off-line more than 300 citations. In order to obtain a printout, the user must either narrow the search to fewer citations, or print out portions of the total:

SS (5) PSTG (542)

USER:

"PRINT OFFLINE

PROG:

LIMIT OF 300 DOCUMENTS FOR OFF-LINE PRINT---

COMMAND DELETED

SS 6/C?

USER:

"PRINT 300 OFFLINE

(The program asks for address information)

PROG:

OK? (Y/N/C)

USER:

YES

PROG:

SS 6/C?

USER:

"PRINT 242 OFFLINE SKIP 300

(The program again asks for address information)

4.10.16 TIME OVERFLOW MESSAGE

TIME OVFL: CONT? (Y/N)

This message indicates that the procedure requested (for example, a large EXPLOSION) requires more computer time than allotted in one "slice" of time. The user may choose to reply YES, in which case the program will continue to process the request after a slight pause, or NO, in which case the program will stop the procedure and return to the next search statement. Several Time Overflow messages may occur during a single procedure, and a YES answer to each continuation question is required to complete the process.

4.10.17 POSTINGS STORAGE OVERFLOW MESSAGE

STORPSTG OVFL

This message indicates that the limit of postings to be stored in a user's workspace has been reached. The "RESTACK", "RESTART", "ERASEALL" or "ERASEBACK" commands may be used to make more room. Alternately, the user may narrow the search strategy so as to retrieve less. The current, stored postings limit is 114,000.

4.10.18 POSTINGS PROCESSOR OVERFLOW MESSAGE

PROCPSTG OVFL

This message is received when the total postings for the terms in one search statement exceed the number that can be stored by the program. When terms are combined in a search, the postings are kept as "intermediate results" while they are being compared. The intermediate storage can only hold 160,000 postings; when more postings are generated, the overflow message results. The user should refine the search statement to lessen the number of postings.

4.10.19 KEYBOARD TERMS OVERFLOW MESSAGE

KEBTRM OVFL

This message indicates that more search terms have been entered in the series (from SS 1 onward) than are allowable by the program. The current limit is 380 terms or 5800 characters, whichever occurs first. This limit applies only to terms entered at the terminal - terms included in EXPLODE instructions are not counted. The "ERASEALL", "ERASEBACK", "RESTACK" or "RESTART" commands may be used to make more room in the series.

4.10.20 GENERATED TERMS OVERFLOW MESSAGE

GENTRM OVFL

When the number of terms in one search statement, generated by the EXPLODE or truncation, exceeds 450, this message results. A more specific EXPLODE or less general truncation (e.g., EMBRY: instead of EMB:) should be used to reduce the number of terms generated.

4.10.21 DYNAMIC REJECT MESSAGE

DYNAJECT

This message may occasionally be received in response to a YES reply to the Time Overflow Message. As the computer processes a very long procedure in several "slices" of time, it stores the results in a workspace shared among all users. If there is insufficient storage space because too many users are currently experiencing Time Overflows (processing long requests) the program sends a Dynamic Reject message and stops processing all requests. The user should reenter the previous statement immediately, because the amount of available storage changes constantly.

4.10.22 TABLE OF PROGRAM MESSAGES

The following is an alphabetical list of ELHILL program messages, followed by brief descriptions:

MESSAGE

ARE YOU AN EXPERIENCED USER?

MEANING

A YES answer will cause any subsequent messages to be printed in the Symbolic Version. A NO answer will provide messages in the Short Version, and an introductory section with directions for using the ELHILL system will appear preceding the first Search Statement cue.

CNT #

A continuation cue, when search terms for one Search Statement require more than one line (remember to end such continued lines with only an AND or OR.)

CONTINUE PRINTING?

A YES answer will cause the program to print out more lines. A NO answer will offer the user the next Search Statement cue.

CONTINUE SUBS

A continuation cue, received in instances in which the subheadings being applied with the "SUBHEADIN APPLY" command require more than one line.

DO YOU WISH TO RESTART?

A YES answer causes the program to RESTART, that is, to place the user back at the HELLO FROM ELHI message. All previous searching will be lost. A NO answer generates the next Search Statement cue

DONE?

A YES answer will cause the program to "STOP, and will remove the user from the ELHILL 3 programs. NO answer will generate the next Search Statement

DYNAJECT

This message indicates a Dynamic Reject, meaning all user requests at a given moment will not be processed, due to a sudden shortage of storage space. The user should reenter the previous Search Statement immediately.

ELHILL 3 IS ABNORMALLY TERMINATING - PLEASE DO NOT HANG UP

This message indicates that the system is going into "suspended animation" for an unspecified period of time. Contact MEDLARS Management if you have difficulties (e.g., USER ID ALREADY IN USE) after the system returns to full operation.

EXPLANATION REQUESTED HAS NOT BEEN PREPARED YET

This message indicates that the user has entered an "EXPLAIN" command preceding a term for which no explanation has been written.

MESSAGE

GENTERM OVFL

HELLO FROM ELHILL 3.
YOU ARE NOW CONNECTED TO...

INCORRECT ARGUMENTS TO
BACKUP COMMAND. COMMAND
IGNORED.

'xxxx' IS NOT A CORRECT
COMMAND NAME

'xxxx' IS NOT A VALID
PRINT PARAMETER. COMMAND
IGNORED

KEBTRM OVFL

LIMIT OF 300 DOCUMENTS FOR
OFF-LINE PRINT---COMMAND
DELETED

MM - MULTI-MEANING

*NONE

NON-EXISTENT SSN SPECIFIED.
PRINT COMMAND IGNORED.

NP - NO POSTINGS

OFF-LINE PRINT COMPLETED

MEANING

This is a Generated Term overflow, indicating that more than 450 terms have been generated in a given Search Statement.

Greeting message which indicates that the user has entered the ELHILL programs.

Program still waiting for input.

This message indicates that whatever characters have been input following the double quote ("") do not spell a command familiar to the program.

This message indicates that the characters entered after the user's "PRINT command do not spell a data element familiar to the program. Therefore, nothing will be printed.

More than 380 search terms have been entered during the present search session.

The user has requested more than 300 citations to be printed off-line.

The term or "TREE" number entered has more than one meaning in the program. The user may opt to choose one or more meanings, or choose none.

There are no citations in which both the factors ANDed together in the last Search Statement appear.

The user has requested a "PRINT from a Search Statement number that has not yet been used in the present search session.

This message indicates that there is no citation having the search term entered in its unit records.

The program has understood the user's instructions and address for an off-line print.

MESSAGEMEANING

PLEASE ENTER USER ID OR LOGON

The program requests that the user type the ID code assigned by NLM over the disguising hash marks.

PLEASE ENTER YOUR PASSWORD

The program is requesting that the user type in the special password attached to the user's ID code.

PROCPSTG OVFL

This is a Postings Processor Overflow message, meaning that the total postings retrieved by the Search Statement exceed the storage capacity of the program 160,000 records.

READY

This is a cue for input received by a user when connected to the TSO portion of the computer. ELH commands are ineffective as a response. To leave the TSO environment, the user enters LOGOFF.

(#) SEARCHED (#) QUALIFY
CONTINUE?

During a STRINGSEARCH operation, the program stops after processing a given number of records, and asks whether the user wishes to continue the search.

SF,C

Search series full message, indicates that 25 Search Statements have been used, and the user must input a command in order to continue.

SKIP PARAMETER INCORRECTLY USED. PRINT COMMAND IGNORED.

This message indicates that the user has asked the program to skip a larger number of citations than exist in the Search Statement, and therefore nothing will be printed.

SS #/C?

This is a Search Statement cue, asking the user to input search terms or a command.

SS (#) PSTG (#)

This message tells the user how many records in the file fit the search parameters input.

SSN SPECIFIED HAS FEWER POSTINGS THAN REQUESTED FOR PRINT.

This message appears when the user has requested the program to print more records than exist in the Search Statement. As a result, none are printed.

MESSAGEMEANING

STORPSTG OYFL

The limit for postings stored in the user's workspace, 114,000, has been exceeded.

SUBHEADINGS ACCEPTED

The user has used the "SUBHEADINGS APPLY command, and the program has understood the subheadings as entered.

SUBHEADINGS CANCELLED

The program has obeyed the user's "SUBHEADINGS CANCEL command.

TIME OVFL: CONT?

This message informs the user that the last Search Statement input requires more than one "slice" of time to process. After each "slice" of processing time, the program inquires as to whether or not the user wishes to continue the processing.

UP N OR DOWN N?

When the program is displaying parts of the Index, as in a "NEIGHBOR command, this question is asked of the user to determine how many more entries, and whether "up" the alphabet or "down" the alphabet, should be displayed.

4.11 PROGRAM LIMITS ON SEARCHING

- 1) Long Search terms will only be read up to 36 characters - a NO POSTINGS message will result when longer terms are used. A long term should be truncated at the 36th character or earlier when searching.
- 2) The total number of terms for all search statements may not exceed 380 terms or 5,800 characters, whichever occurs first. A truncated or exploded term counts as one term.
- 3) The number of terms generated by a truncation or explosion may not exceed 450.
- 4) The number of records retrieved by one search statement may not exceed 114,000.
- 5) The number of records processed to execute a single search statement may not exceed 160,000.
- 6) The total number of search statements may not exceed 25. Use the "ERASE..." or "RESTACK or "RESTART commands to provide more workspace.

4.12 STORED ADDRESSES

ELHILL 3 has the capability to store name and address information for later use in both Off-Line Prints and OFFSEARCHES. Stored addresses, one per ELHILL ID Code, are input into the system by the MEDLARS Management Section, NLM, upon receipt of the Stored Address Form included at the end of this discussion.

Please note that if your institution uses the Stored Address capability, by submission of the form which specifies a particular name/address, all off-line prints and offprints produced under the associated ELHILL ID Code will be sent to that particular stored name/address. When a stored address is in effect, the program will notify the user of this fact with (1) an appropriate message after the user responds to the ARE YOU AN EXPERIENCED USER (y/n)? query and (2) an appropriate message each time a RESTART command is entered. When a stored address is in effect and an Off-Line Print or OFFSEARCH is requested, the program will ask the user to supply only the Requester's name and Search Title:

SS X/C?

USER:

PRT FU OFF-LINE

PROG:

REQUESTER'S NAME, OR SAME-

USER:

JANE DOE

PROG:

SEARCH TITLE, OR NONE-

USER:

DOPA

OK? (Y/N/C)

USER:

Y

OFF(LINE PRINT OR SEARCH) COMPLETED

If the name/address information needs to be changed for the institution, another form must be sent with the new name and address information to MEDLARS Management.

If the stored name/address information needs to be changed for a particular off-line print or OFFSEARCH so that the resultant printout can be sent, for example, to a patron's name and address, then the stored address information can be overridden on-line (for only that particular Off-Line Print or OFFSEARCH) through use of the prespecification capability:

PROG:

SEARCH TITLE, OR NONE-

USER:

ADDRESS = 812 MAIN STREET RM 212

PROG:

SEARCH TITLE, OR NONE-

USER:

DOPA

Alternatively, the searcher may enter MAIL = PROMPT after the SEARCH TITLE, OR NONE- query, and the system will ask for each element of the name and address as if there were no stored address:

PROG:
SEARCH TITLE, OR NONE-
USER:
MAIL = PROMPT
PROG:
NAME?
USER:

Note that this on-line "change" of the stored address only causes a change in the stored address for that particular Off-line Print or OFFSEARCH, and does not change the stored address permanently, or even for the duration of the search session.

NLM suggests that institutions carefully weigh the implications of a permanent stored address before deciding to use this capability. In particular, it is recommended that the STORED ADDRESS capability only be used when experience indicates that the same name and address are used for the majority of Off-line Prints and OFFSEARCHes. Search analysts at an institution must have a clear understanding of the prespecification feature in order to change the name and address information when needed for searches to be sent elsewhere. Institutions which share codes should not use the STORED ADDRESS capability unless a single name and address have been agreed upon. It is not recommended that an institution use the STORED ADDRESS capability when experience indicates that most mailed searches are sent directly to patrons' names and addresses.

National Library of Medicine

STORED ADDRESS

Enter ELHILL ID CODE: _____

Enter name/address information for your institution to which all off-line prints and offsearches will be sent unless overridden on-line by use of the prespecification capability:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

There is a limit of 50 characters for each line.

Please sign this form, include your telephone number, and return to:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

Signature

Date

Telephone Number

4.13 DEFAULT ELEMENTS TABLE (elements searched when fields are not specified)

DATE BASE	ON-LINE and OFFSEARCH DEFAULTS	STRINGSEARCH or SENSEARCH	RANGING ELEMENT DEFAULTS	ELEMENTS FROM WHICH TEXT WORDS ARE TAKEN
MEDLINE	All directly searchable fields (e.g., AU, MH) except TW, TA, JC	TI	ED	TI, AB
BACK75	"	"	"	"
BACK72	"	"	"	"
BACK69	"	"	"	"
BACK66	"	"	"	"
SDILINE	"	"	"	"
CATLINE	All directly searchable fields (e.g., PN, CN, MH) except TW	AB	DA	TI, CE, PE, SE, CS, CN
AVLINE	"	"	"	TI, AB, CN, SE, PE, CS
CANCERLIT	No default--receive multi-meaning messages for any unspecified term	AB	YR	TI, AB, KW
CANCERPROJ	"	AB	ED	TI, AB, HT
CLINPROT	"	TI	FY	TI, AB, HT
EPILEPSY	"	AB	YP	TI, AB, KW
TOXLINE	All directly searchable fields (e.g., TW, AU) except MH ON-LINE; ALL for OFFSEARCH	AB	YR	TI, AB, KW, MH
TOXBACK	"	"	"	"
CHEMLINE	No default--receive multi-meaning messages for any unspecified term	N1	No ranging allowed	Not applicable
RTECS	"	TD	No ranging allowed	CD, AQ, TC, SR NC, ST, KW
SERLINE	"	TI	YR	TI, PU, AT
NAME AUTHORITY	"	NO	DA	Not applicable
MESH VOCABULARY	All directly searchable fields (e.g., MH, SH) except TW	DE	ED	Not applicable

4.14 ELHILL 3 FREE TEXT STOPWORD LIST

A	COPYRIGHT	KEPT	POSSIBLY	SUFFICIENTLY
ABS	COULD	KG	POTENTIALLY	THAN
ABOUT	DID	KM	PREDOMINANTLY	THAT
ACCORDINGLY	DIFFERENT	KNOWLEDGE	PRESENT	THE
AFFECT	DO	LARGELY	PREVIOUSLY	THEIR
AFFECTED	DOES	LIKE	PRIMARILY	THEIRS
AFFECTING	DONE	MADE	PROBABLY	THEM
AFFECTS	DUE	MAINLY	PROMPT	THEN
AFTER	DURING	MAKE	PROMPTLY	THERE
AGAIN	EACH	MANY	QUICKLY	THEREFORE
AGAINST	EFFECT	MAY	QUITE	THESE
ALL	EFFECTS	MG	RATHER	THEY
ALMOST	EITHER	MIGHT	READILY	THIS
ALREADY	ELSE	ML	REALLY	THOSE
ALSO	ENOUGH	MORE	RECENTLY	THOUGH
ALTHOUGH	ESPECIALLY	MOST	REFS	THROUGH
ALWAYS	ETC	MOSTLY	REGARDING	THROUGHOUT
AMONG	EVER	MUCH	REGARDLESS	TO
AN	EVERY	MUG	RELATIVELY	TOO
AND	FOLLOWING	MUST	RESPECTIVELY	TOWARD
ANOTHER	FOR	NEARLY	RESULTED	UNDER
ANY	FOUND	NECESSARILY	RESULTING	UNLESS
ANYONE	FROM	NEITHER	RESULTS	UNTIL
APPARENTLY	FURTHER	NEXT	SAYD	UP
ARE	GAVE	NO	SAME	UPON
ARISE	GETS	NONE	SEEM	USE
AS	GIVE	NOR	SEEN	USED
ASIDE	GIVEN	NORMALLY	SEVERAL	USEFULLY
AT	GIVING	NOS	SHALL	USEFULNESS
AUTHOR	GONE	NOT	SHOULD	USING
AWAY	GOT	NOTED	SHOW	USUALLY
BE	HAD	NOW	SHOWED	VARIOUS
BECAME	HAS	OBTAİN	SHOWN	VERY
BECAUSE	HARDLY	OBTAINED	SHOWS	WAS
BECOME	HAVE	OF	SIGNIFICANTLY	WERE
BECOMES	HAVING	OFTEN	SIMILAR	WHAT
BEEN	HERE	ON	SIMILARLY	WHEN
BEFORE	HOW	ONLY	SINCE	WHERE
BEING	HOWEVER	OR	SLIGHTLY	WHETHER
BETWEEN	IF	OTHER	SO	WHICH
BIOL	IMMEDIATELY	OUGHT	SOME	WHILE
BOTH	IMPORTANCE	OUR	SOMETIM	WHO
BRIEFLY	IMPORTANT	OUT	SOMEWHAT	WHOSE
BUT	IN	OVERALL	SOON	WHY
BY	INTO	OWING	SPECIFICALLY	WIDELY
CAME	IS	PARTICULARLY	STATE	WILL
CAN	IT	PAST	STATES	WITH
CANNOT	ITS	PERHAPS	STRONGLY	WITHIN
CERTAIN	ITSELF	PLEASE	SUBSTANTIALLY	WITHOUT
CERTAINLY	JUST	POORLY	SUCCESSFULLY	WOULD
CHEM	KEEP	POSSIBLE	SUCH	YET

PART 5 OFFSEARCH AND STORESEARCH

5.1 INTRODUCTION

OFFSEARCH is an ELHILL capability which enables a user to enter on-line a search which is to be executed later off-line, in a batch mode process. It is designed to serve the following functions:

- 1) Perform the same search against several data bases, including the one to which the user is connected when entering the search if desired.
- 2) Perform a search against files not available on-line, such as the BACKfiles of MEDLINE or TOXBACK.
- 3) Save time and money for the user by performing searches and printing out the results in batch mode instead of the more expensive interactive mode.
- 4) Execution of stored searches.

STORESEARCH is an ELHILL capability which is intended to serve such functions as:

- 1) Perform the same search repeatedly at intervals as an SDI-type service.
- 2) Perform a search against various data bases.
- 3) Store large groups of related concepts as a "hedge" to be used repeatedly in other searches.

STORESEARCHes cannot be executed on-line; they must be used through OFFSEARCH. However, STORESEARCH saves the user the time it would have taken to key in the entire search each time that search needs to be performed.

5.2 OFFSEARCH LIMITATIONS

OFFSEARCHes have the following limitations: they may contain only 25 search statements, only 380 terms may be used (keyboard terms), only 1800 terms may be generated (through explosions and truncations, etc.), only 500 citations per search statement per file may be printed, only 180 seconds of processing time may be used by a given task, and no more than 3000 records may be Stringsearched in one search statement.

5.3 OFFSEARCH COMMANDS

All commands and functions available in interactive searching are available in OFFSEARCH except the "RESTACK and "PRINT OFF-LINE commands. Three commands used in OFFSEARCH are:

- 1) "OFFSEARCH - This command initiates the OFFSEARCH.
- 2) "OFFSEARCH CANCEL - This command ends the OFFSEARCH and returns the user to interactive searching. No printout will result from a cancelled OFFSEARCH. The command may be entered after any USER: cue.

- 3) "FINISHED - This command is used to indicate that the user has ended the search and is ready to provide name and address information for mailing.

5.4 OFFSEARCH INPUT PROCEDURE

The user begins by entering the command "OFFSEARCH. The program responds by assigning a Taskname to the OFFSEARCH:

```
SS 1 /C?  
USER:  
  
"OFFSEARCH  
PROG:  
TASKNAME=S6174536
```

The Taskname is an eight character string uniquely identifying the OFFSEARCH. The S indicates OFFSEARCH (as opposed to an off-line PRINT), the second character corresponds to the last digit of the date (i.e., 6 may refer to the 6th, 16th, or 26th of the month), and the last six characters give the military time. The example above indicates the search was entered at 5:45 and 36 seconds, p.m. The program then asks the user to choose the nature of the interaction during this OFFSEARCH:

```
PROG:  
ON-LINE OUTPUT:  
NPS/PSTG/NONE?
```

If the user types NPS, the search will be stored for later use against the files specified, but will not execute search statements while the search is being entered. The user will receive NO POSTINGS messages if the program does not find the entered terms in the Index. Thus, the NPS option may be used to verify spelling while avoiding the time-consuming on-line searching. Note that NPS must be used if a Stored Search is to be executed in the OFFSEARCH.

If the user chooses the PSTG option, the search being entered will actually be executed against the file to which the user is connected as well as other files, if specified in batch mode, later. Actual postings for the file to which the user is connected will appear, and the user may browse by printing citations on-line.

In this situation, the search statements entered in OFFSEARCH are stored in the user's on-line environment as well. Thus, when the OFFSEARCH has been completed, the program will prompt for the next search statement rather than SS 1. However, the command "OFFSEARCH erases all previous stored information, so that only the OFFSEARCH statements will be counted. Note that the postings are ONLY for the on-line file, not for any other file specified.

The NONE option offers no interaction; the program merely stores each search term entered for execution in batch mode later.

The program next asks the user which files are to be searched:

```
PROG:  
FILES?
```

The user specifies up to six (6) file names, separated by commas (spaces are optional):

USER:
MEDLINE, BACK75, BACK72, BACK69

The program then asks the user which PRINT format is desired:

PROG:
PRINTSPECS?

The user may specify one of the pre-determined formats, either Standard (SD), Full (FU) or Detailed (DL), or may specify certain elements, for example, AU, TI, MH, LA. If the elements specified do not include one of the "required" elements for a given file, the printout for that file will contain only "nonsense" characters in place of citations not containing any of the user-specified elements. For example, if a user names only the Abstract (AB) element to be printed, any citation not containing an abstract will be represented on the printout by a string of nonsense characters. The required elements for MEDLINE-related files are:

ED	Entry Date
TA	Journal Title Abbreviation
LA	Language
JC	Journal Title Code
CN	Citation Number
MH	Main Heading
TI	Title
PG	Pagination

The user enters the PRINTSPECS separated by commas and spaces:

USER:
AU, TI, SO, MH, LA

If more than one file name was entered in response to the FILES? query, the program will respond:

PROG:
PRINT ELEMENTS, IF ANY, WILL BE EVALUATED
AGAINST THE (first named) FILE.

This program message alerts the user to the fact that the print element mnemonics are not universal across all files, and only "logically related" files share the same mnemonics. For example, although it is possible to search CATLINE and MEDLINE in the same OFFSEARCH task, if the user has specified AU as a print element, there will be nonsense output for this element from CATLINE, as that file does not contain an AU element. MEDLINE and its BACKfiles and SDILINE are logically related files, as are CATLINE and AVLNE, and as are TOXLINE and TOXBACK. As search strategy, default terms, etc. also vary between these groups, mixing file groups in one OFFSEARCH should be done cautiously.

It is possible to use OFFSEARCH to retrieve citations from dissimilar files.
In order to do so, the user must use one of the standard PRINT options (STANDARD or SD, FULL or FU, or DETAILED or DL). Also, the first file name entered

after a FILES? prompt cannot be the name of the file to which you are connected while you are in OFFSEARCH. For example, if you are connected to MEDLINE and you want retrieval from MEDLINE, CATLINE, and BACK72, you may specify either CATLINE or BACK72. first in response to the FILES? prompt, but you may not specify MEDLINE first. Example:

PROG:	PROG:
FILES?	FILES?
USER:	USER:
BACK72, MEDLINE, CATLINE	CATLINE, MEDLINE, BACK72
	or
PROG:	PROG:
PRINTSPECS?	PRINTSPECS?
USER:	USER:
FULL	SD

The program then gives the user a chance to (1) continue into the OFFSEARCH program, (2) cancel the present OFFSEARCH, or (3) cancel any OFFSEARCHing and return to the interactive mode with the following question:

OK? (Y/N/C)
USER:

If the user response is YES or Y, then the OFFSEARCH program will continue. If the response is NO or N, then the user will be given a new TASKNAME by the system and can begin again in the OFFSEARCH mode. If the response is CANCEL or C, the system will place the user in the interactive mode, cancelling the OFFSEARCH mode.

When the user answers YES to the program's question, the OFFSEARCH program continues and the program responds:

PROG:
ENTER SEARCH-

STS SS1/C?
USER:

Note that the system highlights the OFFSEARCH mode by prefacing each search statement number by *STS*. The user enters and combines search terms in the usual manner. If the search includes an EXPLODE and the EXPLODED term exists in more than one "tree", the system default is to EXPLODE each occurrence of the term in all "trees" and in response to the message received: ENTER NUMBER, NONE, OR EXPAND? the user should enter the number 1. The system will actually perform the EXPLOSION using all "trees".

After the search has been entered, the response to the last *STS* SS #/C? prompt should be:

USER:
"FINISHED

The program will now ask which search statements are to be printed:

SSNOS-OVRIDES?

The user may enter up to 5 numbers separated by commas and spaces. No characters except numbers and commas can be entered in response to this query. If any other characters are entered, nonsense characters may be included in the resultant print. EXAMPLE: 19, 20, 22

The user may also limit the number of citations printed by using the LIMIT = operation. Any number less than the maximum number of printable citations may be specified.

The program then prompts for the search title and the user's name and address as for an off-line print. If the Stored Address Capability is being utilized by your institution, the OFFSEARCH program at this point will query the user for the Requester's Name and Search Title information to be entered. Pre-specification is necessary to change a stored address (if it is in effect at your institution for the code you are using) for particular offsearches. Please see PART 5.5 PRESPECIFICATION IN OFFSEARCHES and PART 4.12 STORED ADDRESSES for information on overriding the stored address information.

When the program has received responses to each question, it announces:

OFFSEARCH COMPLETED

No OFFSEARCH is stored by the system until that message has been generated. If the system goes down or the user is disconnected during the entering of an OFFSEARCH, the search must be entered again from the beginning.

The user may elect to cancel the OFFSEARCH at the point when the system asks OK? (Y/N/C) by entering the command OFFSEARCH CANCEL following any USER: cue.

5.4.1 SAMPLE OFFSEARCH IN THE PSTG OPTION:

USER.

OFFSEARCH

PROG:

TASKNAME = S7110157

ON-LINE OUTPUT:--NPS/PSTG/NONE?

USER:

PSTG

PROG:

FILES?

USER:

MEDLINE, BACK72

PROG:

PRINTSPECS?

USER:

SD

PROG:

PRINT ELEMENTS, IF ANY, WILL BE EVALUATED AGAINST THE MEDLINE FILE.
OK? (Y/N/C)

USER:

YES

PROG:

ENTER SEARCH-

STS SS 1 /C?

USER:

*EPILEPSY/VE

PROG:

SS (1) PSTG (9)

STS SS 2 /C?

USER:

1 AND DOG DDISEASE

PROG:

NP (DOG DDISEASE)

SS (2) PSTG (0)

STS SS 3 /C?

USER:

BACKUP

PROG:

STS SS 2 /C?

USER:

1 AND DOG DISEASES

PROG:

SS (2) PSTG (5)

STS SS 3 /C?

USER

FINISHED

PROG:

SSNOS-OVRIDES?

USER:

2

PROG:

SEARCH TITLE, OR NONE-

USER:

LIMIT = 100

PROG:

SEARCH TITLE, OR NONE-

USER:

ANIMAL EPILEPSY

PROG:

NAME?

USER:

JANE DOE

PROG:

ADDRESS?

USER:

8600 ROCKVILLE PIKE

PROG:

CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-

USER:
ROCKVILLE, MARYLAND 20014
PROG:
REQUESTER'S NAME, OR SAME-

USER:
SAME
PROG:
OFFSEARCH COMPLETED.

SS 4 /C?
USER:

Note that the computer will process EVERY search statement, both on-line if the PSTG option has been specified and of course during batch processing, even those with errors. Thus, to save processing time, the user should always use the "BACKUP or "ERASEBACK command to wipe out unnecessary search statements, as shown in this example.

5.5. PRESPECIFICATION IN OFFSEARCHES

The capability exists for prespecifying user-supplied information and for correcting information previously supplied by the user in OFFSEARCH as well as in Offline Prints (see PRESPECIFICATION IN OFFLINE PRINTS in PART 4.9.13.8.1). The following list contains keywords representing the elements which may be prespecified and/or corrected in OFFSEARCH.

NAME
ADDRESS
CITSTAZIP
REQUESTER
TITLE
ONOUTS
OFFOUTS
FILES
PRINTSPECS
SSNOS/OVRIDES

"Prespecification" allows the user to input the answer to a program query before it is asked or to change an answer already entered. Note that each keyword is entered followed by a space, an equals sign (=) and another space, then the information being entered. More than one item may be prespecified on a single line by following each prespecification with a comma and a space. Prespecifications may not be continued on a second line. A brief example follows:

PROG:
ON-LINE OUTPUT: NPS/PSTG/NONE?

USER:
PSTG, FILES = MEDLINE, BACK72

PROG:
PRINTSPECS?

USER:
SD, ONOUTS = NPS

In addition to their use as prespecifications, keywords may be used to correct a line of information previously entered. Note that in the latter portion of the example above, the user changed from the PSTG on-line output to NPS, using the ONOUTS = keyword.

Similarly, OFFOUTS, FILES, and PRINTSPECS may be entered as keywords to pre-specify or correct information. Such keywords may be entered either before the first *STS* SS #/C? cue or after the "FINISHED command at the end of the search, but not during the search itself. If, for example, the searcher had specified SD for Standard PRINTSPECS before the search, but later decided that FULL would be a better choice, the correction:

PRINTSPECS = FULL

may be entered after the "FINISHED command, immediately following any USER: cue. The FILES information may be changed in the same way.

ONOUTS and OFFOUTS present special problems. ONOUTS is the keyword representing the ON-LINE OUTPUT: NPS/PSTG/NONE? query. It can only be changed after the FILES? query or after the PRINTSPECS? query, as after these, the user has begun searching and cannot change the on-line output during the search. If the user discovers that the PSTG on-line output results in too many time overflows, the on-line output still cannot be changed during the search. The user must either accept the time overflow problem or cancel the OFFSEARCH and begin again with another "OFFSEARCH command, this time in the NPS or NONE option. OFFOUTS has limited use. The default form of output for an OFFSEARCH is a printout of citations. However, on some occasions the user may wish to know the number of postings existing in the BACKfiles for a given series of search statements, without receiving any hard-copy printout of citations. In this case, the instruction OFFOUTS = PSTG may be entered after any USER: cue before the actual searching begins. It is suggested that the user enter this information following the PRINTSPECS? query. For example:

PROG:
PRINTSPECS?

USER:
OFFOUTS = PSTG
PROG:
OK? (Y/N/C)

USER:
YES
PROG:
ENTER SEARCH-

STS SS 1/C?

Note that entering the OFFOUTS = PSTG instruction at this point eliminates the PRINTSPECS? query, because there will be no printout, thus PRINTSPECS? information is unnecessary. When specifying OFFOUTS = PSTG, the user should call the MEDLARS Management Section at the National Library of Medicine (301/496-6193 or 800/638-8480) the next business day to find out the number of postings for each search statement. The user must know the date the

search was entered, the task number of the search, and the user ID code under which the search was run, as well as which files the search was performed against, in order for MEDLARS Management to find the proper statistics. Note that only those OFFSEARCHes run at NLM generate postings statistics; OFFOUTS = PSTG will offer no information if the search is entered at SUNY. Regardless of the user's reply to the SSNOS/OVRIDES? query at the end of the search, if OFFOUTS = PSTG has been instructed the statistics will show the number of postings for each of up to 25 search statements.

NAME, ADDRESS, CITSTAZIP, REQUESTER, and TITLE are keywords which are used to prespecify or correct information entered by the user in the following queries:

NAME?
ADDRESS?
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-
REQUESTER'S NAME OR SAME
SEARCH TITLE OR NONE

Prespecification of the NAME, ADDRESS and CITSTAZIP information must be used if the ID code being used has a stored address which the user wishes to override for this search. The user may change each line separately, e.g., NAME = JANE DOE, or enter MAIL = PROMPT after any USER cue. MAIL = PROMPT will cause the system to ask for each item, as though there were no stored address.

SSNOS/OVRIDES is the keyword used to correct the response to the SSNOS/OVRIDES? query. The keyword is used as shown:

SSNOS/OVRIDES = #, #, #

with the desired search statement numbers separated by commas and spaces.

Prespecification and correction using the keywords afford an added dimension of flexibility to OFFSEARCH. They can be used to save time in entering searches as well:

OFFSEARCH
PROG:
TASKNAME = S9134732
ON-LINE OUTPUT:--NPS/PSTG/NONE?

USER:
PSTG, FILES = MEDLINE, BACK72, BACK69
PROG:
PRINTSPECS?

USER:
SD, ONOUTS = NPS
PROG:
OK? (Y/N/C)

USER:
YES
PROG:
ENTER SEARCH-

STS SS 1 /C?
USER:
EXP D15.236.872/AE
PROG:

STS SS 2 /C?
USER:
CHILD OR CHILD, PRESCHOOL
PROG:

STS SSS 3 /C?
USER:
1 AND 2
PROG:

STS SS 4 /C?
USER:
ASPIRIN/ME AND 3
PROG:

STS SS 5 /C?
USER:
FINISHED
PROG:
SSNOS-OVRIDES?

USER:
3, 4
PROG:
SEARCH TITLE, OR NONE-

USER:
SSNOS/OVRIDES = 4
PROG:
SEARCH TITLE, OR NONE-

USER:
DRUG EFFECTS IN CHILDREN
PROG:
NAME?

USER:
JANE DOE, ADDRESS = 718 MAIN STREET
PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-

USER:
BALTIMORE, MARYLAND 20901
PROG:
REQUESTER'S NAME, OR SAME

USER:
SAME, CITSTAZIP = BALTIMORE, MARYLAND 21205
PROG:
OFFSEARCH COMPLETED.

5.6 STORESEARCH LIMITATIONS

The searches stored by a user are accessed by their names. For this reason, there are several rules governing the naming of stored searches:

- 1) Only one search may be stored under a given name. A second search stored under the same name as an already existing search prevents access to EITHER search. However, the user still must pay for storage of both.
- 2) Names cannot be purely numeric, e.g., 75648.
- 3) Names cannot contain Boolean operators or special characters. For example, a search named KIDNEY AND LIVER will not be accessible, but storage will be charged to the user. Special characters include the greater and less than symbols, left and right parentheses, plus sign, dollar sign, semi-colon, dash, hyphen, comma, percent sign, apostrophe, equals sign, pound sign, colon, backward slash, asterisk, period, ampersand, or any other characters other than "regular" alphabetics, spaces, and the numerics 0-9.
- 4) Names cannot exceed 30 characters in length.

When a search is stored, the user's ID code and the qualifier (SN) meaning Search Name is appended to the name by the computer, and the user must be Toggled In under that same code to use the search. The searches are entered into the system during the batch-processing period the evening of the day they are stored. Thus, entering an OFFSEARCH on a Tuesday afternoon means it can be used only after the computer is operational Wednesday morning. The user may check to see whether a search has been stored properly by using the "DIAGRAM command:

USER:
"DIAGRAM MYASTHENIA GRAVIS SDI

Note that no (SN) qualifier is used.

Stored searches are subject to the same processing limitations (1800 generated terms, 180 seconds of processing time, etc.) listed for OFFSEARCHes.

If the user wishes to change the formulation of a stored search, he must delete the search entirely using the "PURGESEARCH command:

USER:
"PURGESEARCH MYASTHENIA GRAVIS SDI

Note that neither the ID code nor the (SN) qualifier is used with the "PURGESEARCH command. Again, like storing, purging is not performed until the evening of the day on which the purge was entered. The user should attempt to "DIAGRAM the search by name the day after it has been purged, to make sure the search was purged as requested.

5.7 STORESEARCH EXECUTION PROCEDURE

A stored search is available for use only through OFFSEARCH. It cannot be

used on-line. A search may be stored either on the SUNY or the NLM computer, but it can only be executed at the same computer at which it is stored. To execute, the user enters "OFFSEARCH and proceeds through the program questions as usual. When the actual search begins, the stored search is entered, with the (SN) qualifier, as any other term:

```
*STS SS 1/C?  
USER:  
CONTACT DERMATITIS IN ADULTS (SN)
```

The stored search may also be combined with other terms or search statement numbers:

```
*STS SS 11/C?  
USER:  
9 AND 10 AND CONTACT DERMATITIS IN ADULTS (SN)
```

5.8 STORESEARCH COMMANDS

The following commands are used in storing searches:

- 1) "STORESEARCH - This command initiates the STORESEARCH.
- 2) "FINISHED - This command informs the computer that the entire search has been entered.
- 3) "PURGESEARCH Searchname - This command will cause the system to remove the search stored under this name from the computer file.
- 4) "STORESEARCH CANCEL - This command is used during the actual storing of the search, and will negate the "STORESEARCH command. It may be entered after any USER: cue.

5.9 STORESEARCH INPUT PROCEDURE

The user initiates storing a search with the command "STORESEARCH. The program responds with a question:

```
PROG:  
SEARCHNAME?
```

The user now enters the name under which the search will be stored, keeping in mind the restrictions previously discussed.

The program now asks the user what sort of on-line output is desired while the search is being entered. Thus, the user may choose to search a data base on-line with the same terms that will be entered for the stored search.

```
PROG:  
ON-LINE OUTPUT:---NPS/PSTG/NONE?
```

The user may specify PSTG to actually perform the search in the interactive file to which he was connected when entering "STORESEARCH, or enter NPS to specify only notice of terms with no postings, or enter NONE to eliminate all interaction.

The program now is ready for the search:

PROG:
ENTER SEARCH-

STS SS 1/C?
USER:

The user enters the desired terms as for an OFFSEARCH. The STORESEARCH procedure also defaults to every tree in which a term appears for the EXPLODE command, when executed in OFFSEARCH. When all terms and combinations have been entered, the final desired result MUST be derived from the LAST search statement entered, because when the stored search is executed in OFFSEARCH, ONLY that last statement will be printed out or used for further searching. Thus, when the user enters:

USER:
"FINISHED

the program does not ask for any search statement numbers, but rather responds:

PROG:
STORESEARCH COMPLETED

As in OFFSEARCH, any erroneous statements should be erased with the "BACKUP or "ERASEBACK command.

5.10 AUTOMATIC SDI'S

Users may store searches on the NLM computer ONLY, and have them run by NLM every month against the current SDILINE file or the current month's update to the TOXLINE file.

The searches to be run automatically must be named with a four character alph-numeric tag which indicates the file against which the search is to be performed and the printout format:

<u>SDILINE</u>		<u>TOXLINE</u>
S001-S200	PRINT STANDARD	T001-T200
S201-S400	PRINT FULL, INCLUDE RP	T201-T400
S401-S600	PRINT AU, TI, SO, TT, LA, MH, AB, RP PRINT DETAILED (TOXLINE ONLY)	T401-T600

The alpha-numeric tag (i.e., S### or T###) precedes the rest of the stored search name and indicates that it is a stored search to be processed automatically. The string must be followed by a space, and the length of the remaining name may not exceed 25 characters. These names are governed by the same rules as names for non-automatic stored searches, i.e., no special characters or Boolean operators.

The user wishing to store searches to be run automatically by NLM is asked to store several searches and perform them against the SDILINE (or the latest

month of TOXLINE) citations, in the OFFSEARCH mode. When the searches have been tested in this way, the user decides that the searches are ready to be run automatically (that is, the citations they retrieve are relevant), and sends in the Request Form (included as the following page) to MEDLARS Management Section at NLM. Only one form is needed for a given user ID code, regardless of how many searches are stored under that code. It is not necessary to send in a form when searches are stored or purged. The only uses for the form are: 1) to begin automatic SDI service, 2) to add another file, either SDILINE or TOXLINE, as one form will only provide service against one file, or 3) to stop automatic SDI service. Separate forms should be submitted for TOXLINE or SDILINE service, that is, one file per form.

Automatic SDI searches are processed and mailed monthly to the name and address listed on the form; searches cannot be mailed to individual patrons. The date on which each set of SDI searches is run is publicized in the NEWS file. Stored searches entered after that date will not be run until the next update the following month.

AUTOMATIC SDI REQUEST FORM

Please return to:
MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

USER LOGIN ID CODE (e.g. XYZ01): _____

MAILING ADDRESS (Maximum: 47 characters per line, including spaces)

CENTER NAME:

ADDRESS:

CITY, STATE, ZIP:

(Country, if non-USA)

1. Check One: STORESEARCHES input under this code to be run by NLM automatically each month are to be run against the following file: (Note: The user ID specified above must have on-line access to the specified file.)

SDILINE

TOXLINE

2. NAMING CONVENTIONS - The names of all searches to be processed by NLM must begin with one of the following alphanumeric character strings.

SDILINE

***TOXLINE**

S001
through
S200

PRINT STANDARD

T001
through
T200

S201
through
S400

PRINT FULL INCLUDE BB

T201
through
T400

S401
through
S600

SDILINE:

T401
through
T600

3. One form must be submitted for each code under which searches will be stored for execution by NLM. Once a form is submitted, all searches stored and named beginning with one of the above numbers will be automatically executed by NLM each month.

4. It is the responsibility of each center to submit a revised Automatic SDI Request Form if there is a change in the address where all SDIs for the center are to be sent.

5. One of these forms must be submitted for each file against which automatic SDIs will be processed. That is, if the code XYZ01 will be storing "S" searches and "T" searches, two forms must be submitted.

*TOXLINE STORESEARCHES which are run automatically by NLM will be processed only against the current month's update of the TOXLINE file.

PART 6 MESH VOCABULARY

6.1 INTRODUCTION

Most of the MEDLARS II data bases may be searched with terms from the National Library of Medicine's controlled vocabulary, Medical Subject Headings, commonly known as MeSH. This chapter of the Manual discusses the hard copy MeSH in PARTS 6.1 - 6.4, and the on-line MeSH file in PARTS 6.5 - 6.10.

MeSH is a list of all the terms used to index material for computer retrieval. The terms are arranged both alphabetically and hierarchically. The alphabetic list is used as a thesaurus, and the hierarchical list indicates the relationship between terms. These relationships assume importance when the EXPLODE capability is used. The basic principle observed in indexing is that a concept is always indexed to the most specific terms possible. For example, an article about Kanamycin is indexed to KANAMYCIN and not to the broader term ANTIBIOTICS.

6.2 MESH VERSIONS

MeSH is published in five forms: the Index Medicus MeSH (sometimes called the "black and white MeSH"), the Annotated Alphabetic MeSH, the Permuted MeSH, the MeSH Tree Structures, and the Cumulated List of New Medical Subject Headings, 1963-1973. Price and ordering information for each publication is available from the Office of Public Information at the National Library of Medicine.

6.2.1 THE INDEX MEDICUS MESH

This publication is revised yearly and is also published as Part II of the January issue of Index Medicus. It is divided into two sections: an alphabetic listing of terms, and the hierarchical or "tree" structures which will be described below.

The alphabetic listing contains each term (major descriptor) with any cross references applied to that term. It does not include any non-Index Medicus subject headings (such as check tags, geographics, languages, or non-MeSH terms). Entry terms appear only as cross references, "see" and minor descriptors as "see under" cross references. Each major descriptor is followed in the list by its MeSH classification number(s), indicating its position in the tree structure(s).

The Index Medicus MeSH also contains lists of topical subheadings used in indexing, cataloging and on-line searching; and form, geographic and language subheadings used only in cataloging. Each year this edition of MeSH also gives a list of new headings for the year and deleted headings. The list of new terms indicates the manner in which the concept was indexed before the term was introduced. The list of deleted terms indicates the manner in which the concept is to be indexed in the future and the heading which has been substituted for the deleted heading in any citation already in the MEDLINE file.

6.2.2 MEDICAL SUBJECT HEADINGS - ANNOTATED ALPHABETIC LIST

This form of MeSH is used by searchers, indexers and catalogers, and is intended to facilitate use of the on-line data bases, whereas the Index Medicus MeSH facilitates use of Index Medicus. The Annotated MeSH contains major descriptors, minor descriptors with the major descriptors to which they are mapped, entry terms, geographic and check tag descriptors, non-MeSH terms, forward and backward cross references, entry versions as part of the MeSH annotation, and tree number(s). In addition, most descriptors have annotations giving information which might prove useful to indexers, catalogers, or searchers (e.g., dates when terms became major and/or minor descriptors).

Sections of the MeSH alphabetic listing may be displayed on-line by using the "NEIGHBOR command with the (MH) qualifier (unless the user is connected to the MESH VOCABULARY FILE, in which case no qualifier is needed).

6.2.3 PERMUTED MEDICAL SUBJECT HEADINGS

The Permuted MeSH is a special computer-generated list of the major descriptors, minor descriptors, entry terms, and geographic and check tag descriptors. This tool enables searchers to find all MeSH terms containing a given word, regardless of the position of that word in the term. In effect, the permuted MeSH is a Key Word Out of Context (KWOC) index to the MeSH vocabulary. For example:

DUCTS
BILE DUCTS
BILE DUCTS, INTRAHEPATIC
EJACULATOR DUCTS
MULLERIAN DUCTS
PANCREATIC DUCTS
VITELLINE DUCTS

DUCTUS
DUCTUS ARTERIOSUS
DUCTUS ARTERIOSUS, PATENT
DUCTUS COCHLEARIS *see under LABYRINTH*
DUCTUS DEFERENS *see VAS DEFERENS*

6.2.4 MEDICAL SUBJECT HEADINGS - TREE STRUCTURES

This is a hierarchical arrangement of the subject headings into fifteen broad categories with seven levels of specificity within each category. Beginning in 1975, the Tree structures appear as the second section of the Index Medicus MeSH, as well as in a separate publication.

The Tree structures include major and minor descriptors, non-MeSH terms and geographic descriptors (in the final, Z category). The following is an example of one section of the seven-level tree structure for category D - Drugs and Chemicals:

HETEROCYCLIC COMPOUNDS	D3
HETEROCYCLIC COMPOUNDS, BRIDGED RING (NON MESH)	D3.605
MORPHINANS	D3.605.497
MORPHINE	D3.605.497.575
MORPHINE DERIVATIVES	D3.605.497.575.547
CODEINE	D3.605.497.575.547.204
CODEINE DERIVATIVES	D3.605.497.575.547.204.355
HYDROCODONE	D3.605.497.575.547.204.540
OXYCODONE	D3.605.497.575.547.204.650

A MeSH classification or Tree number is given with each term. Some terms have more than one Tree number. Tree numbers may be displayed on-line by using the "MESHNO command (see PART 4 of this Manual). Although the trees may be helpful in locating terms relating to a given subject, tree numbers are only useful in search strategy when using the EXPLODE capability - a MeSH classification number may be entered as part of an EXPLODE instruction. In the example Tree above, entering the instruction EXPLODE D3.605.497.575 would retrieve postings indicating the number of citations indexed either to that term itself (MORPHINE) or to any subordinate term, i.e., a term indented under MORPHINE in the Tree.

The "TREE command may be used to display part of the Tree structures on-line. For example, the command "TREE MORPHINE will display the following:

MORPHINANS	D3.605.497
MORPHINE	D3.605.497.575
MORPHINE DERIVATIVES D3.605.407.575.547 (*)	

The asterisk following MORPHINE DERIVATIVES indicates that more terms are indented under that term; in order to display these, the command "TREE MORPHINE DERIVATIVES must be used.

6.2.5 THE CUMULATED LIST OF NEW MEDICAL SUBJECT HEADINGS, 1963-1973

This list of new MeSH terms added between 1963 and 1973 is arranged in three sections:

- 1) An alphabetic list of new terms with their year of entry and the term(s) under which the concept was indexed previously.
- 2) The same list broken down by year of entry.
- 3) The same as list (1) except alphabetic by the terms under which the new terms were previously indexed.

6.3 TYPES OF TERMS IN MESH

6.3.1 MAJOR DESCRIPTORS

A Major Descriptor is any subject heading under which citations may be found in Index Medicus, or the Current Catalog, or any heading which is acceptable to the on-line system without mapping to another heading.

6.3.2 MINOR DESCRIPTORS

A Minor Descriptor is a subject heading which may be used in indexing, cataloging or searching, but which is automatically mapped to a major descriptor for printing in Index Medicus or Current Catalog. Minor Descriptors include terms that were formerly provisional headings or see under cross references under MEDLARS I, as well as new terms introduced since the beginning of MEDLARS II. When an indexer uses a Minor Descriptor to index the central point of an article (which normally would require an Index Medicus-printable term)

the computer automatically adds the appropriate Major Descriptor under which the article must appear in Index Medicus. Minor Descriptors may be searched online directly, but for Index Medicus searching, only Major Descriptors are used.

6.3.3 ENTRY TERMS

An entry term is a synonym or near-synonym for a major or minor descriptor. A Major or Minor Descriptor is automatically substituted for an Entry Term by the computer in an online search. For example, RHINITIS, ALLERGIC is an Entry Term for HAY FEVER. Any article to which the indexer assigns the entry term RHINITIS, ALLERGIC will automatically acquire the MeSH descriptor HAY FEVER in place of RHINITIS, ALLERGIC. Online, when the term RHINITIS, ALLERGIC is entered, the computer retrieves all citations indexed to HAY FEVER, including both those that were indexed to HAY FEVER and those that were indexed to RHINITIS, ALLERGIC. The entry term will not appear in the unit records retrieved, nor is it retrievable separately from the Major or Minor Descriptor to which it maps.

6.3.4 NON-MESH TERMS

A Non-MeSH Term is one used only to group related terms together in the hierarchical listing of MeSH terms. Non-MeSH terms are not used in indexing and therefore cannot be directly searched online, but the MeSH classification number assigned to a Non-MeSH can be used in the EXPLODE capability.

6.3.5 GEOGRAPHIC DESCRIPTORS

These are the names of cities, countries, provinces and other geographic regions which may be used for online searching. They are considered Major but are never used for Index Medicus printing. They are grouped hierarchically in the Z category of the Tree structures.

6.3.6 CHECK TAG DESCRIPTORS

These are large volume headings, one or more of which are appended to almost every record. They are searchable on-line but do not appear as headings in Index Medicus. The check tags are: FEMALE, MALE, HUMAN, ANIMAL, IN VITRO, COMPARATIVE STUDY, CASE REPORT, CLINICAL RESEARCH, HISTORICAL ARTICLE, HISTORICAL BIOGRAPHY, ENGLISH ABSTRACT, UNITED STATES GOVERNMENT SUPPORTED, N.I.H. and UNITED STATES GOVERNMENT SUPPORTED, NON-N.I.H.

Other large volume headings appear on indexing data forms, and are also referred to as "check tags", but they are also Major Descriptors, such as CHILD and INFANT.

6.3.7 QUALIFIERS (SUBHEADINGS)

Qualifiers or subheadings provide a way of breaking down a concept into its specific aspects. For example, an article on the physiology of the eye would be indexed to EYE/physiology rather than simply to EYE.

There are currently seventy-five (75) topical Qualifiers used in indexing, cataloging and searching. In addition, there are form, geographic, language and

topical Qualifiers used only in cataloging and in searching the CATLINE data base. These latter will be discussed in the section of this Manual dealing with CATLINE. Not all topical Qualifiers are permitted for all categories of terms. ETHICS/toxicity, for instance, would make no sense.

Qualifiers are entered online in a search statement in several ways:

- 1) The Qualifier or its abbreviation may be attached to a single MeSH heading following a slash, as ATROPINE/T0, (or ATROPINE/TOXICITY).
- 2) The Qualifier or its abbreviation may be attached to a truncated term or to a term with a variable character symbol in place of one or more letters, as DOPA:/AE or as BENZ#NE/AN.
- 3) The Qualifier or its abbreviation may be attached to an explosion, either of a MeSH term or of a MeSH classification number, with or without a central concept indicator:

EXPLODE D10.516/ME

EXPLODE LIPIDS/ME

EXPLODE *LIPIDS/ME

- 4) The abbreviation for the Qualifier may be coordinated with a heading or the results of a previous search statement by using the AND logical operator:

HALOTHANE AND TO

The two-letter abbreviation for the qualifier should be used, and the abbreviation may be further clarified by using the mnemonic (SH):

5 AND BL (SH)

Qualifiers entered in this way will cause the program to retrieve any record having that subheading attached to any MeSH heading, not only the heading named in the search.

- 5) Use of the "SUBHEADINGS APPLY command (see Part 4).

Below is a comparison of the retrieval resulting from methods 1), 4), and 5):

SS 1/C?

USER:

HALOTHANE/T0

Attached with slash

PROG:

SS (1) PSTG (29)

SS 2/C?

USER:

HALOTHANE AND TO (SH)

Attached with logical AND

PROG:

SS (2) PSTG (52)

SS 3/C?

USER:

"SUBHEADINGS APPLY TO

Attached with "SUBHEADINGS command

PROG:

SUBHEADINGS ACCEPTED

SS 3/C?

USER:

HALOTHANE

PROG:

SS (3) PSTG (29)

SS 2 has retrieved several articles in which the term HALOTHANE does not have the Qualifier toxicity attached to it, but that Qualifier has been used with another MeSH heading in the citation record.

6.3.7.1 ALPHABETICAL LIST OF TOPICAL QUALIFIERS

The following is an alphabetical list of Topical Qualifiers, their abbreviations, and the categories of the Tree Structures with which they may be used. () gives date of entry into MEDLARS.

<u>Qualifiers</u>	<u>Abbreviation</u>	<u>Allowable Categories</u>
(66)Abnormalities	AB	A(except A10,A11,A12,A16)
66)Administration & Dosage	AD	D
66)Adverse Effects	AE	D,E,F4,H1,J
75)Analogs & Derivatives	AA	D(except D8)
67)Analysis	AN	A,B(except B2),C4,D,G3,J
66)Anatomy & Histology	AH	A,B1,B2,B5,B6
68)Antagonists & Inhibitors	AI	D
66)Biosynthesis	BI	D
67)Blood	BL	B2,C,D,F3
66)Blood Supply	BS	A(except A7,A11,A12),C4
67)Cerebrospinal Fluid	CF	B2,C,D,F3
68)Chemical Synthesis	CS	D
67)Chemically Induced	CI	C,F3
66)Classification	CL	All categories except A & Z
66)Complications	CO	C,F3
66)Congenital	CN	C(except C16)
67)Cytology	CY	A,B
75)Deficiency	DF	D
66)Diagnosis	DI	C,F3
67)Diagnostic Use	DU	D,H
75)Diet Therapy	DH	C,F3
66)Drug Effects	DE	A,B,F1,F2,G4 thru G11
66)Drug Therapy	DT	C,F3
78)Economics	EC	C,E,F3,N2,N3,N4
67)Education	ED	E,F,G1,G2,G3,H thru M,N1,N2
66)Embryology	EM	A(except A11,A12,A16),B1,B2,B6,C
66)Enzymology	EN	A,B(except B2),C,F3
75)Ethnology	EH	Z
66)Etiology	ET	C,F3
66)Familial & Genetic	FG	C,F3
78)Genetics	GE	B,D6,D8 thru D13,D24

<u>Qualifiers</u>	<u>Abbreviation</u>	<u>Allowable Categories</u>
(66)Growth & Development	GD	A(except A10,A11,A12,A16),B
(66)History	HI	C thru F,G1,G2,G3,H thru N
(66)Immunology	IM	A,B,C,D,F3
(66)Injuries	IN	A(except A10,A11,A12,A16)
(66)Innervation	IR	A(except A8,A10,A11,A12)
(66)Instrumentation	IS	E,F2,F4,G1,G2,G3,H,J,L
(66)Isolation & Purification	IP	B1,B2,B4,B5,D
(78)Legislation & Jurisprudence	LJ	I1,I2,N2,N3,N4
(68)Manpower	MA	E6,F4,G1,G2,H,I,J,L,N2,N3,N4
(66)Metabolism	ME	A,B,C,D,F3
(75)Methods	MT	E,F4,G1,G2,G3,H,I,J,L,N
(67)Microbiology	MI	A,B1,B2,B6,C,F3
(67)Mortality	MO	C,E,F3,F4
(66)Nursing	NU	C,E,F3
(66)Occurrence	OC	C,F3
(78)Organization & Administration	OG	N2,N3,N4
(75)Parasitology	PS	A,B1,B2,B6,C,F3
(66)Pathogenicity	PY	B1,B3,B4,B5
(66)Pathology	PA	A,C,F3
(67)Pharmacodynamics	PD	D
(66)Physiology	PH	A,B,D,F1,F2
(66)Physiopathology	PP	A,C,F3
(66)Poisoning	PO	D,J
(66)Prevention & Control	PC	C,F1,F3,G3,I1
(78)Psychology	PX	C,F3,E(except E7)
(66)Radiation Effects	RE	A,B,D,F1,F2,G4 thru G12,J
(67)Radiography	RA	A,C
(78)Radionuclide Imaging	RI	A,C
(66)Radiotherapy	RT	C
(67)Rehabilitation	RH	C,F3
(68)Secretion	SE	A,C4,D
(68)Standards	ST	D,E,F4,G1,G2,G3,H,I,J,L,N
(68)Supply & Distribution	SD	D,E,F4,H,I,J,L,N2,N3,N4
(66)Surgery	SU	A,B2,C,F3
(66)Therapeutic Use	TU	D,H
(66)Therapy	TH	C,F3
(66)Toxicity	TO	D,J
(75)Transmission	TM	C
(66)Transplantation	TR	A
(78)Trends	TD	F4,G1,G2,G3,I,N
(75)Ultrastructure	UL	A(except A12),B,C4
(67)Urine	UR	B2,C,D,F3
(68)Utilization	UT	E,G1,G2,G3,H,I,J,L,N
(66)Veterinary	VE	C(except C22),E

3.7.2 CATEGORICAL LIST OF TOPICAL QUALIFIERS

The following list shows the Topical Qualifiers grouped alphabetically under the categories with which they may be used and it notes more specific subcategory restrictions:

Category A - Anatomy

(abnormalities) not A10, 11, 12, 16	EN (enzymology)	PA (pathology) not A12
(analysis)	GD (growth & development)	PH (physiology)
(anatomy & histology) not A11, 12	not A10, 11, 12, 16	PP (physiopathology) not A11, 12
(blood supply) not A7, 11, 12	IM (immunology)	
(cytology) not for sub-cellular terms	IN (injuries) not A10, 11, 12, 16	RE (radiation effects)
(drug effects)	IR (innervation) not A8, 10, 11, 12	RA (radiography)
(embryology) not A11, 12, 16	ME (metabolism)	RI (radionuclide imaging)
	MI (microbiology)	SE (secretion)
	PS (parasitology)	SU (surgery)
		TR (transplantation)
		UL (ultrastructure) not A12

Category B - Organisms

(analysis) not B2	EN (enzymology) not B2	PS (parasitology) only B1, 2, 6
(anatomy & histology) not B3, 4	GE (genetics)	
(blood) only B2	GD (growth & development)	PG (pathogenicity) not B2, 6
(classification)	IM (immunology)	PH (physiology)
(cerebrospinal fluid) only B2	IP (isolation & purification) not B2, 6	RE (radiation effects)
(cytology) not B2, 4	ME (metabolism)	not B2
(drug effects) not B2	MI (microbiology) only B1, 2, 6	SU (surgery) only B2
(embryology) not B3, 4, 5		UL (ultrastructure) not B2
		UR (urine) only B2

Category C - Diseases

(analysis) only C4	EN (enzymology)	PC (prevention & control)
(blood)	ET (etiology)	PX (psychology)
(blood supply) only C4	FG (familial & genetic)	RA (radiography)
(chemically induced)	HI (history)	RI (radionuclide imaging)
(classification)	IM (immunology)	RT (radiotherapy)
(complications)	ME (metabolism)	RH (rehabilitation)
(congenital) not C16	MI (microbiology)	SE (secretion) only C4
(cerebrospinal fluid)	MO (mortality)	SU (surgery)
(diagnosis)	NU (nursing)	TH (therapy)
(diet therapy)	OC (occurrence)	TM (transmission)
(drug therapy)	PS (parasitology)	UL (ultrastructure) only C4
(economics)	PA (pathology)	UR (urine)
(embryology)	PP (physiopathology)	VE (veterinary) not C22

Category D - Chemicals & Drugs

AD (administration & dosage)	CF (cerebrospinal fluid) not D25, 26	PH (physiology) not D25, 26
AE (adverse effects)	DF (deficiency) not 25, 26	PO (poisoning)
AN (analysis)	DU (diagnostic use)	RE (radiation effects)
AA (analogs & derivatives) not D8, 25, 26	GE (genetics) only D6, 8-13, 24	SE (secretion)
AI (Antagonists & inhibitors) not D25, 26	HI (history)	ST (standards)
BI (biosynthesis) not D25, 26	IM (immunology) not D25, 26	SD (supply & distribution)
BL (blood) not D25, 26	IP (isolation & purification)	TU (therapeutic use)
CS (chemical synthesis)	ME (metabolism)	TO (toxicity)
CL (classification)	PD (pharmacodynamics)	UR (urine) not D25, 26

Category E - Procedures & Techniques

AE (adverse effects)	IS (instrumentation)	PX (psychology) not E7
CL (classification)	MA (manpower) only E6	ST (standards)
EC (economics)	ME (methods)	SD (supply & distribution)
ED (education)	MO (mortality)	UT (utilization)
HI (history)	NU (nursing)	VE (veterinary)

Category F - Psychology & Psychiatry

F1 & F2

CL (classification)	HI (history) only SPEC	PH (physiology)
DE (drug effects)	IS (instrumentation) only SPEC	RE (radiation effects)
ED (education) only SPEC		

F3

BL (blood)	ET (etiology)	PS (parasitology)
CI (chemically induced)	FG (familial & genetic)	PA (pathology)
CL (classification)	HI (history)	PP (physiopathology)
CO (complications)	IM (immunology)	PC (prevention & control)
CF (cerebrospinal fluid)	ME (metabolism)	PX (psychology)
DI (diagnosis)	MI (microbiology)	RH (rehabilitation)
DH (diet therapy)	MO (mortality)	SU (surgery)
DT (drug therapy)	NU (nursing)	TH (therapy)
EC (economics)	OC (occurrence)	UR (urine)

F4

CL (classification)	MA (manpower)	ST (standards)
ED (education)	ME (methods)	SD (supply & distribution)
HI (history)	MO (mortality)	TR (trends)
IS (instrumentation)		

Category G - Biological Sciences, Health Occupations, Environment, Biology & Physiology

AN (analysis) only G3	IS (instrumentation) only G1-3	RI (radiation effects) only G4-12
CL (classification) all trees	MA (manpower) only G1, 2	ST (standards) only G1-3
DE (drug effects) only G4-11	ME (methods) only G1-3	TR (trends) only G1-3
ED (education) only G1-3	PC (prevention & control) only G3	UT (utilization) only G1-3
HI (history) only G1-3		

Category H - Physical Sciences

AE (adverse effects)	HI (history)	ST (standards)
CL (classification)	IS (instrumentation)	SD (supply & distribution)
DU (diagnostic use)	MA (manpower)	TU (therapeutic use)
ED (education)	ME (methods)	UT (utilization)

Category I - Social Sciences

CL (classification)	MA (manpower)	SD (supply & distribution)
ED (education)	ME (methods)	TR (trends)
HI (history)	PC (prevention & control) only II	UT (utilization)
LJ (legislation & juris-prudence) only II, 2	ST (standards)	

Category J - Technology, Industry, Agriculture, Food

AE (adverse effects)	HI (history)	RE (radiation effects)
AN (analysis)	IS (instrumentation)	ST (standards)
CL (classification)	MA (manpower)	SD (supply & distribution)
ED (education) with discretion	ME (methods)	TO (toxicity)
	PO (poisoning)	UT (utilization)

Category K - Humanities

CL (classification)	ED (education)	HI (history)
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Category L - Information & Communication

CL (classification)	IS (instrumentation)	ST (standards)
ED (education)	MA (manpower)	SD (supply & distribution)
HI (history)	ME (methods)	UT (utilization)

Category M - Named Groups

CL (classification)

ED (education)

HI (history)

Category N - Health Care

CL (classification)

LJ (legislation & juris-prudence) only N2-4

ST (standards)

EC (economics) only N2-4

MA (manpower) only N2-4

SD (supply & distribution only N2-4)

ED (education) only N1, 2

ME (methods)

TR (trends)

HI (history)

OG (organization & administration) only N2-4

UT (utilization)

Category Z - Geographic Names

EH (ethnology)

6.3.7.3 HIERARCHICAL LISTS OF TOPICAL QUALIFIERS

It is sometimes useful to think of qualifiers grouped into hierarchical or "tree" structure. For example, CYTOLOGY may be thought of as a specific branch of ANATOMY. In the list below most of the Topical Qualifiers are grouped in such a hierarchical arrangement.

Anatomy & Histology

Blood Supply

Cytology

(for normal cytology)

Ultrastructure

Embryology

Abnormalities

Innervation

Pathology

(for abnormal cytology)

Diagnosis

Enzymology

Immunology

Microbiology

Parasitology

Pathology

Radiography

Radionuclide Imaging

Etiology

Chemically Induced

Complications

Congenital

Familial & Genetic

Genetics

Immunology

Microbiology

Parasitology

Transmission

Therapy

Diet Therapy
Drug Therapy
Nursing
Prevention & Control
Radiotherapy
Rehabilitation
Surgery

Analysis

Blood
Cerebrospinal Fluid
Enzymology
Isolation & Purification
Urine

Pharmacodynamics

Administration & Dosage
Adverse Effects
Poisoning
Toxicity
Antagonists & Inhibitors
Therapeutic Use

Physiology

Growth & Development
Immunology
Metabolism
Biosynthesis
Blood
Cerebrospinal Fluid
Deficiency
Enzymology
Urine
Physiopathology
Secretion

Always consider the possibility that a MeSH main heading may exist which covers the desired concept as well as, or better than, a main heading/subheading combination. For instance, an article on the control of communicable diseases is more likely to appear under the ready-made main heading COMMUNICABLE DISEASE CONTROL than under the main heading/subheading combination COMMUNICABLE DISEASES/prevention & control.

6.3.8 CROSS REFERENCES

The alphabetic lists of MeSH headings contain three kinds of Cross References with their corresponding backward ("referred from") references:

<u>Cross Reference</u>	<u>Referred From</u>
See	X
See under	XU
See related	XR

The "See" reference directs the user from a synonym or near synonym to the preferred MeSH term. The synonym is also called an **Entry Term** because when used in an on-line search, it retrieves the same citations as would be retrieved by the descriptor to which it refers.

PYROMANIA See FIRESETTING BEHAVIOR (F3)

FIRESETTING BEHAVIOR (F3)

X PYROMANIA

The "See under" reference directs the user from a specific term to a more general term, under which the concept appears in Index Medicus. However, the specific term is included in the vocabulary as a Minor Descriptor, so it may be used as a search term on-line and the system will do the appropriate mapping. For example:

KOEHLERS DISEASE See under OSTEOCHONDRITIS (C5)

OSTEOCHONDRITIS (C5)

XU KOEHLERS DISEASE

The "See related" reference generally directs the user to a related concept in a different category of the Tree structures. For example:

EMERGENCIES (C23)

See related CRISIS INTERVENTION (F4)

CRISIS INTERVENTION (F4)

XR EMERGENCIES (C23)

6.3.9 ENTRY VERSIONS

Many terms in the MeSH vocabulary exist in an abbreviated form to facilitate indexing and searching. These **Entry Versions** are found in the Annotated MeSH under the full term. They are preceded by a DF: which stands for Data Form. For example:

PREGNANCY COMPLICATIONS

C13.703

DF: PREGN COMPL

The abbreviated Entry Version of a term may be used for searching on-line or indexing in place of the full form of the term. For example:

PREGN COMPL

PROG:

SS (1) PSTG (3728)

OR

PREGNANCY COMPLICATIONS

PROG:

SS (1) PSTG (3728)

6.4 PROCEDURES FOR USING MESH

Whether starting a search in the Public MeSH or the Annotated MeSH, the procedure is much the same.

First identify the MeSH form of the concept by looking in the alphabetic list. Remember that a term may have several root forms. For example, terms dealing with the kidney may be found under KIDNEY or RENAL or another term beginning with NEPHR- or GLOMERUL-. Also remember that compound headings may be listed in normal or inverted order. For example, myelocytic leukemia is listed in MeSH as LEUKEMIA, MYELOCYTIC.

If a suitable term is not found in the alphabetic listing, look in the Permutated MeSH for a root term which may be embedded in a multi-word term. For example, the word RELAXANTS is embedded in the MeSH term MUSCLE RELAXANTS, CENTRAL.

After finding the desired term in the alphabetic listing, consult the Tree Structures under the number for that term to make certain that a more specific term does not exist in the vocabulary. Always remember that indexers use the most specific term available to describe a concept.

6.4.1 GENERAL INDEXING POLICIES FOR THE CHOICE OF MESH HEADINGS

- 1) Articles are always indexed to the most specific MeSH headings that describe the contents. For example, an article on hepatitis caused by toxic agents is indexed HEPATITIS, TOXIC and not with HEPATITIS or LIVER DISEASES.
- 2) When an article is indexed, the indexer decides if the headings assigned will be IM (Index Medicus) or NIM (non-Index Medicus). IM headings reflect the main points of the article and are terms under which the article will be found in Index Medicus. NIM headings represent subjects discussed in the article which are not the main points of the article. Like IM headings, NIM headings are available for computer searching, but the articles will not be found in Index Medicus under non-Index Medicus headings. In searching, IM headings are indicated with a central concept indicator (*) located immediately preceding the term.
- 3) A coordination of two or more MeSH headings is used when a specific term is not available. For example, articles on the National Multiple Sclerosis Society would be indexed with the terms VOLUNTARY HEALTH AGENCIES and MULTIPLE SCLEROSIS.
- 4) A broader term and related specific terms may be used by the indexer when an article discusses both a broad concept and several specific aspects of that subject. For example, an article discussing barbiturates as a pharmacological group as well as several specific barbiturates will be indexed for each of the specifics as well as the broader term BARBITURATES, which will be printed in Index Medicus.

5) The use of "Precoordinated Headings" in MeSH takes precedence over the use of two or more Main Headings or a Main Heading/Qualifier combination. Tumors of the kidney are indexed to KIDNEY NEOPLASMS and not to KIDNEY and NEOPLASMS. Surgical repair of the heart is indexed to HEART SURGERY and not HEART/surgery, but surgical repair of specific heart diseases is indexed to the disease term with the qualifier surgery.

6) When Precoordinated Headings are not available, a Main Heading/subheading combination takes precedence over a Main Heading combined with another Main Heading. Storage of a substance in the liver is indexed to LIVER/metabolism and not to LIVER and METABOLISM.

7) For diseases, infections, injuries, poisoning and the like, look first under these common types of Precoordinated Headings: Organ-Disease, Organ-Infection, Organ-Injury, Substance-Poisoning, etc. For example, search under:

LIVER DISEASES not under LIVER and DISEASE

TUBERCULOSIS, PULMONARY not under TUBERCULOSIS and LUNG DISEASES

SALMONELLA INFECTIONS not under SALMONELLA and INFECTION

MERCURY POISONING not under MERCURY and POISONING

HEAD INJURIES not under HEAD and WOUNDS AND INJURIES

ELECTRIC INJURY not under ELECTRICITY and WOUNDS AND INJURIES

8) If a Precoordinated Organ-Disease Heading is not available, indexers coordinate the organ term with the closest disease category heading into which a specific organ falls. For example, to search for jejunal diseases, which is not a MeSH heading, coordinate JEJUNUM and INTESTINAL DISEASES. Likewise, to search ulna diseases, coordinate ULNA and BONE DISEASES.

9) A MeSH heading ending -OLOGY or -IATRICS is always the field, the discipline the researcher, the M.D., the Ph.D. or the student. The -OLOGY or -IATRICS term is never the organ, system, physiological process or the disease. For articles on the dermatologist indexers use DERMATOLOGY. For articles on skin disorder or the patient with a skin disorder indexers use SKIN DISEASES or a more specific term indented under SKIN DISEASES in the tree structures.

6.5 ON-LINE VOCABULARY FILE - INTRODUCTION

The MeSH VOCABULARY FILE (MVF) consists of the unit records for all main heading and qualifiers. Each unit record is a complete description of one main heading qualifier.

The MESH VOCABULARY FILE will operate under the ELHILL 3 programs. The search strategies, commands and program messages described in PART 4 of this manual will apply to the MVF, except where specific differences are described.

6.6 ENTERING THE MESH VOCABULARY FILE

To access the MESH VOCABULARY FILE, enter the command "FILE MESH after logging in to ELHILL.

5.7 TYPES OF TERMS IN MESH

Before describing each of the data elements of the unit record, certain basic definitions for types of MeSH terms should be kept in mind.

- 1) A descriptor is any heading used in indexing, cataloging or searching.
- 2) A major descriptor is a heading which may appear in Index Medicus or Current Catalog or any heading which is acceptable to the on-line system without mapping (citation type, check tag, geographic, non-MeSH or withdrawn major descriptors, or major descriptors used in the List of Journals Indexed in Index Medicus).
- 3) A minor descriptor is a heading which may be used in indexing, cataloging or searching, but which is mapped to a major descriptor for printing in Index Medicus or Current Catalog. In Medical Subject Headings it appears as a see under cross reference.
- 4) An entry term is a synonym or near-synonym for a major or minor descriptor. It may be used in indexing, cataloging or searching, but is mapped to a major or minor descriptor. An entry term, where it exists, is part of the Vocabulary Backward Cross Reference (BX) data element in the unit record of a major or minor descriptor, but it is not itself represented by a unit record. In Medical Subject Headings it appears as a see cross reference.
- 5) A qualifier is any subheading. Only topical subheadings are used in indexing, but in cataloging qualifiers may be topical, form, geographic language or time.

6.8 MESH VOCABULARY FILE UNIT RECORD

The MVF unit record is the computer-stored information representing one descriptor or qualifier. There are 33 data elements in the MVF to describe each heading or qualifier. The table below lists all of the data elements with their two-letter category qualifiers. The table also indicates which elements are directly searchable as search terms in the Index, which can be searched using the STRINGSEARCH strategy and which will be displayed, where present, as a result of the three standard "PRINT commands.

The MeSH VOCABULARY FILE Unit Record

<u>Category Qualifier</u>	<u>Data Element Name</u>	<u>Directly Searchable</u>	<u>STRING-SEARCHABLE</u>	<u>"PRINT</u>	<u>"PRINT FULL</u>	<u>"PRINT DETAILED</u>
MH	Descriptor Print					
	Version	X	X	X	X	X
DE	Descriptor Entry					
	Version	X	X	X	X	X
DS	Descriptor Sort					
	Version		X			X
DC	Descriptor Class	X	X		X	X
DT	Descriptor Type		X	X	X	X
DF	Descriptor Form		X			X
MC	MeSH Class Number	X	X	X	X	X
BX	Vocabulary Backward					
	Cross Reference	X	X			X
SH	Qualifier Print					
	Version	X	X	X	X	X
QE	Qualifier Entry					
	Version	X	X	X	X	X
QS	Qualifier Sort					
	Version		X			X
QT	Qualifier Type	X	X		X	X
QG	Qualifier Usage		X			X
SC	Scope Notes		X		X	X
QA	Topical Qualifier					
	Abbreviation	X	X			X
AT	Allowable Tree					
	Node		X			X
RS	Record Source		X			X
AN	Annotation		X			X
CN	CAS Registry Number		X			X
CR	Cross Reference		X	X	X	X
DW	Date Withdrawn		X			X
AE	Date Major Descriptor					
	Established		X		X	X
IE	Date Minor Descriptor					
	Established		X		X	X
DM	Descriptor Mapped-To		X		X	X
ED	Entry Date		X			X
EC	Entry Combinations		X			X
HN	History Note		X			X
JX	Journal Subject Cross					
	Reference		X			X
MR	MeSH Tree Structures					
	Running Head		X			X
PS	Printhead Selection	X	X			X
TD	Thesaurus ID		X			X
LV	Last Major Revision		X			X
NO	Date Qualifier					
	Established		X			X
B#	Backfile Postings				X	X

The following is a description of each of the data elements in the unit record. It should be remembered that not all of the data elements described below are present in every unit record. Where a particular data element is missing from a unit record it will, of course, not be displayed in a "PRINT command.

6.8.1 DESCRIPTOR PRINT VERSION (MH)

The print version is the form of the descriptor which appears in NLM's publications. In the case of MeSH terms the search version is the same as the print version. The Descriptor Print Version is directly searchable and will be displayed in all standard "PRINT commands.

6.8.2 DESCRIPTOR ENTRY VERSION (DE)

The entry version is the form of the descriptor which 1) uniquely identifies it when the first 36 characters of the Descriptor Print Version (MH) do not uniquely identify the descriptor or 2) provides an abbreviated version of the descriptor. For example, in the unit record for GLUCOSEPHOSPHATE DEHYDROGENASE, the entry version GPD would appear in the DE field. This data element is directly searchable and will be displayed in all standard "PRINT commands.

6.8.3 DESCRIPTOR SORT VERSION (DS)

The sort version is the form of the descriptor needed for proper sequencing in publications. It is actually required in a record unless the descriptor has a sort version that cannot be generated algorithmically by the computer. Example of a sort version:

B-LYMPHOCYTES = the print version

LYMPHOCYTES B = the sort version

Thus, B-LYMPHOCYTES prints in Index Medicus after LYMPHOCYTES.

This data element is not directly searchable and will be displayed in a "PRINT DETAILED command.

6.8.4 DESCRIPTOR CLASS (DC)

The descriptor class is a number from 0 to 8.

1 = a major descriptor

2 = a citation type major descriptor

3 = a check tag major descriptor

4 = a geographic major descriptor

5 = a non-MeSH major descriptor

6 = a withdrawn major descriptor

7 = a minor descriptor

8 = a withdrawn minor descriptor

0 = a major descriptor used only as a subject heading in the List of Journals Indexed in Index Medicus

These numeric tags are directly searchable. They should be searched with the category qualifier (DC) to avoid a Multi-Meaning Message. For example:

1 (DC)

PROG:
SS (1) PSTG (9621)

This data element will be displayed in a "PRINT FULL or "PRINT DETAILED command.

6.8.5 DESCRIPTOR TYPE (DT)

The descriptor type is either the number 1 for a major descriptor or the number 2 for a minor descriptor. It is not directly searchable and will be displayed in "PRINT, "PRINT FULL or "PRINT DETAILED commands.

6.8.6 DESCRIPTOR FORM (DF)

The descriptor form is a number from 3 to 6 or the number 10.

3 = citation type major descriptor
4 = a check tag major descriptor
5 = a geographic major descriptor
6 = a non-MeSH major descriptor
10 = a major descriptor used only as a subject heading in the List of Journals Indexed in Index Medicus

This data element is not directly searchable and will be displayed in a "PRINT DETAILED command.

6.8.7 MeSH CLASS NUMBER (MC)

The MeSH class number is the number which designates the position of a major or minor descriptor in the hierarchical MeSH Tree Structures. This number is directly searchable either alone or within the EXPLODE capability. For example, the following search will retrieve the records for LEUKOCYTES and all the specific kinds of LEUKOCYTES in the MeSH vocabulary:

EXPLODE A11.118.637

PROG:
SS (1) PSTG (9)
SS 2 /C?
USER:

"PRINT MH

PROG:
MH - B-LYMPHOCYTES
MH - BASOPHILS
MH - EOSINOPHILS
MH - GRANULOCYTES
MH - LEUKOCYTES
MH - LYMPHOCYTES
MH - MONOCYTES
MH - NEUTROPHILS
MH - T-LYMPHOCYTES

All MeSH Class Numbers for each descriptor will be displayed in all standard "PRINT commands.

6.8.8 VOCABULARY BACKWARD CROSS REFERENCES (BX)

This field identifies descriptors or entry terms from which "see" (from entry term to major or minor descriptor), "see under" (from minor descriptor to major descriptor) or "see related" (from major descriptor to major descriptor) cross references have been made to the descriptor being represented by the unit record. The format of the BX field is:

DESCRIPTOR OR ENTRY TERM (PRINT VERSIONS) REFERRED FROM:TYPE OF
CROSS REFERENCE:DATE ENTRY TERM ESTABLISHED:ENTRY TERM ENTRY
VERSION:ENTRY TERM SORT VERSION

The TYPE OF CROSS REFERENCE is a number:

- 0 = "see" cross reference non-print
- 1 = "see" cross reference
- 2 = "see under" cross reference
- 3 = "see related" cross reference

Backward cross references are directly searchable by entering the print version of the descriptor or entry term referred from; the entire field will be displayed in a "PRINT DETAILED" command.

6.8.9 QUALIFIER PRINT VERSION (SH)

The print version is the form of a qualifier which appears in NLM's publications. For example, PHARMACODYNAMICS. This data element is directly searchable and will be displayed in all standard or tailored "PRINT commands.

6.8.10 QUALIFIER ENTRY VERSION (QE)

The entry version of a qualifier is the abbreviated form which is used in indexing and cataloging. For example, the indexer may use PHARM in place of the qualifier PHARMACODYNAMICS. These abbreviations are directly searchable and will be displayed in all standard "PRINT commands.

6.8.11 QUALIFIER SORT VERSION (QS)

The sort version is the form of a qualifier needed for proper sequencing in NLM publications. It is not actually required in a record unless the descriptor has a sort version that cannot be generated algorithmically by the computer. This version of a qualifier is not directly searchable and will be displayed in a "PRINT DETAILED" command.

6.8.12 QUALIFIER TYPE (QT)

The qualifier type is identified on the unit record as a number from 1 to 5.

- 1 = a topical qualifier (PHARMACODYNAMICS)
- 2 = a form qualifier (POPULAR WORKS)
- 3 = a time qualifier (19th CENT.)
- 4 = a geographic qualifier (FRANCE)
- 5 = a language qualifier (GERMAN)

Qualifiers of types 2 through 5 are used exclusively in cataloging. These numeric tags are directly searchable. They should be searched with the category qualifier (QT) to avoid a Multi-Meaning Message. For example:

1 (QT)

PROG:
SS (1) PSTG (74)

The Qualifier Type will be displayed in a "PRINT FULL or "PRINT DETAILED command.

6.8.13 QUALIFIER USAGE (QG)

Qualifier usage is indicated by a C, meaning that the qualifier is only used in cataloging. Qualifiers used in indexing have nothing in this field. This data element is not directly searchable. It will be displayed in a "PRINT DETAILED command.

6.8.14 SCOPE NOTES (SC)

A scope note consists of free-form text giving the meaning and scope of descriptors and qualifiers. For example, the scope note for ADVERSE EFFECTS is: 'Used with drugs, chemicals, biological and physical agents and manufactured products for unintended or undesired reactions occurring in normal usage or accepted dosage; includes hypersensitivity or idiosyncrasy. Used for adverse effects or complications of diagnostic, therapeutic, anesthetic, surgical and other procedures.' This data element is not directly searchable. It will be displayed in a "PRINT FULL or "PRINT DETAILED command.

6.8.15 TOPICAL QUALIFIER ABBREVIATION (QA)

These are the two-character abbreviations which the on-line searcher may use in searching topical qualifiers. For instance, the two-letter abbreviation for POISONING is PO. These data elements are directly searchable and will be displayed in "PRINT DETAILED commands.

6.8.16 ALLOWABLE TREE NODE (AT)

This data element is in the record of topical qualifiers and consists of the letter of the category(ies) or first node or the subcategory(ies) of the MeSH Tree Structures with which the qualifier may be used. For example, the letter D in this field on the record of the qualifier ANALYSIS means that it can be legally used in combination with main headings in Category D of the Tree Structures. These category and subcategory designators are not directly searchable. This data element will be displayed in a "PRINT DETAILED command.

6.8.17 RECORD SOURCE (RS)

The record source field contains the letter O, C, and/or M followed in each case by a colon and two or three initials. For example:

O:GMB

C:CAB

M:GHR

O stands for the Originator of the record and is followed by the initials of the person originating the record. C stands for the person who checked (that is, reviewed) the record, followed by his/her initials. M stands for the person authorizing file maintenance of the record, followed by his/her initials. All vocabulary records for major and minor descriptors which were in the system before 1975 have MED as the initials of the originator, checker, and maintainer. This data element is not directly searchable. It is displayed in a "PRINT DETAILED command.

6.8.18 ANNOTATION (AN)

Any informative note about a descriptor may appear in this field. This data element is not directly searchable. It is displayed in a "PRINT DETAILED command.

6.8.19 CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER (CN)

This field will contain the unique 5 to 9 digit number in a hyphenated format which Chemical Abstracts Service has assigned to a chemical descriptor. For enzymes the E.C. number derived from Enzyme Nomenclature (1972) is placed in this field. These data elements are not directly searchable. They are displayed in the "PRINT DETAILED command.

6.8.20 CROSS REFERENCE (CR)

The cross reference field contains the major descriptors to which the major descriptor represented by the unit record refers in the form of see related references. For example, in the unit record for ACID-BASE EQUILIBRIUM the cross reference field would contain the term ACIDOSIS. In the printed alphabetic lists the entry would be:

ACID-BASE EQUILIBRIUM

see related

ACIDOSIS

Cross references are not directly searchable. They will be displayed in standard "PRINT commands.

6.8.21 DATE WITHDRAWN (DW)

If the unit record is for a descriptor which has been deleted, the date of deletion appears in this field in the form YYMMDD. July 11, 1971 would appear as 710711.

This data element is not directly searchable. It will be displayed in a "PRINT DETAILED command.

6.8.22 DATE MAJOR DESCRIPTOR ESTABLISHED (AE)

In the unit record for a major descriptor the date the heading was established as a major descriptor is displayed in this field in the form YYMMDD. December 28, 1973 would appear as 731228. This data element is not directly searchable, but it will be displayed in the "PRINT FULL or "PRINT DETAILED command.

6.8.23 DATE MINOR DESCRIPTOR ESTABLISHED (IE)

If the unit record is for a minor descriptor or a major descriptor which had previously been a minor descriptor, the date of its establishment as a minor descriptor is entered in this field in the form YYMMDD. March 16, 1971 would appear as 710316. This data element is not directly searchable. It will be displayed in the "PRINT FULL or "PRINT DETAILED command.

6.8.24 DESCRIPTOR MAPPED-TO (DM)

In the record for a minor descriptor this field contains the major descriptor or major descriptor/qualifier combination to which the term is mapped. This data element is not directly searchable. It will be displayed in a "PRINT, "PRINT FULL or "PRINT DETAILED command.

6.8.25 ENTRY DATE (ED)

The entry date is a computer-generated date in the format YYMMDD on which the unit record was added to the system. June 15, 1974 would appear as 740615. Since 1975 it represents the earliest date the descriptor or qualifier was available to use for input of citations to the computer. This data element is not directly searchable. It will be displayed in the "PRINT DETAILED command.

6.8.26 ENTRY COMBINATIONS (EC)

If a legal descriptor/qualifier combination would be synonymous with a pre-coordinated descriptor, this relationship is given in the EC field. For example, in the unit record for HEART the EC field would contain the information that

HEART/SURGERY = HEART SURGERY

These data elements are not directly searchable. They will be displayed in the "PRINT DETAILED command.

6.8.27 HISTORY NOTE (HN)

Information concerning broader terms or synonyms under which the concept was formerly indexed or cataloged is given in the HN field. These data elements are not directly searchable. They will be displayed in the "PRINT DETAILED command.

6.8.28 JOURNAL SUBJECT CROSS REFERENCES (JX)

A descriptor which is in the List of Journals Indexed in Index Medicus either as a "see" cross reference or a "see related" cross reference is recorded in the JX field. In the case of a "see" cross reference, the referred from descriptor

is followed by :4. In the case of a "see related" cross reference, the referred from descriptor is followed by :5. For example, in the record for GENERAL MEDICINE the following information appears in the JX field:

JS - INTERNAL MEDICINE:4

In the subject section of LJI the entry would be INTERNAL MEDICINE SEE GENERAL MEDICINE. This data element is not directly searchable. It will be displayed, if present, in the "PRINT DETAILED command.

6.8.29 MeSH TREE STRUCTURES RUNNING HEAD (MR)

The running head is the text string to be printed at the top of the page in the Tree Structures in those cases where the running head is different from the descriptor at the first node of the category or subcategory. For example, in subcategory D2 the first node descriptor is ORGANIC CHEMICALS (NON MESH), but the running head is CHEMICALS-ORGANIC, the term in the MR field of the record for ORGANIC CHEMICALS (NON MESH).

These data elements are not directly searchable. They will be displayed, if present, in the "PRINT DETAILED command.

6.8.30 THESAURUS ID (TD)

Thesauri other than MeSH in which the term is included are identified in the TD field. This data element is directly searchable and will be displayed in a tailored "PRINT command. This field is not currently in use.

6.8.31 LAST MAJOR REVISION (LV)

This field contains the date, in the format YYMMDD, of the last major revision made to a unit record. April 1, 1970 would appear as 700401. This data element is not directly searchable. It will be displayed in the "PRINT DETAILED command.

6.8.32 NOTES (NO)

This field contains any notes about a qualifier; for example, the date a qualifier was established appears in this field in the form YYMMDD. January 1, 1966 would appear as 660101. This data element is not directly searchable. It will be displayed in the "PRINT DETAILED command.

6.8.33 EXAMPLES OF MeSH VOCABULARY FILE UNIT RECORDS

If an MVF unit record is describing a Descriptor (Main Heading) it will appear like this:

MH- DIELDRIN
DT- 1
MC- D2.455.526.439.371
MC- D5.723.491.491.366
DC- 1
RS- 0:MED
RS- C:MED

If the unit record is describing a Qualifier (Subheading) it will appear like this

SH- ADVERSE EFFECTS

QE- ADV EFF

QT- 1

SC- USED WITH DRUGS, CHEMICALS, BIOLOGICAL AND PHYSICAL AGENTS AND
MANUFACTURED PRODUCTS FOR UNINTENDED OR UNDESIRABLE REACTIONS
OCCURRING IN NORMAL USAGE OR ACCEPTED DOSAGE: INCLUDES HYPERSENSITIVITY
OR IDIOSYNCRASY. USED FOR ADVERSE EFFECTS OR COMPLICATIONS OF
DIAGNOSTIC, THERAPEUTIC, ANESTHETIC, SURGICAL AND OTHER PROCEDURES.

QA- AE

AT- D

AT- E

AT- H

AT- J

FD- 731227

RS- O:JC

RS- C:NP

NO- 660101

6.9 MeSH VOCABULARY FILE "PRINT COMMANDS"

There are three standard "PRINT commands in the MVF. They are listed below with their abbreviations and the data elements which will be displayed with each.

1) "PRINT or "PRT

MH - Descriptor Print Version
DE - Descriptor Entry Version
DT - Descriptor Type
MC - MeSH Class Number
SH - Qualifier Print Version
QE - Qualifier Entry Version
CR - Cross Reference
DM - Descriptor Mapped-To

2) "PRINT FULL or "PRT FU

MH - Descriptor Print Version
DE - Descriptor Entry Version
DC - Descriptor Class
DT - Descriptor Type
MC - MeSH Class Number
SH - Qualifier Print Version
QE - Qualifier Entry Version
QT - Qualifier Type
SC - Scope Notes
CR - Cross Reference
AE - Date Major Descriptor Established
IE - Date Minor Descriptor Established
DM - Descriptor Mapped-To

3) "PRINT DETAILED or "PRT DL

All the data elements in the unit record will be displayed with this command.

All MVF "PRINT commands will display 25 lines plus the number of lines needed to complete the record being printed at the 25th line, unless you explicitly ask for fewer unit records.

If you specify a large number of unit records, the first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified may be displayed by answering YES to each Continue Printing? message.

MVF "PRINT commands output is sorted by Print Version in backwards alphabetical order with numbers before letters. If Descriptors and Qualifiers are in one retrieval, all descriptor records are printed first.

Tailored "PRINT commands, including the OFF-LINE option, may be constructed to meet a non-standard printing requirement.

6.10 SPECIAL FEATURES OF MVF SEARCHING

"SUBHEADINGS . . ." Commands ,

The three commands to apply, cancel and display subheadings are technically available to users of the MeSH VOCABULARY FILE. However, they should never be used in this file since a search on a descriptor (main heading) will receive a NO POSTINGS message if subheadings have been applied. Also remember that switching to or from the MVF will not cancel any subheadings which were previously applied. They must be cancelled with a "SUBHEADINGS CANCEL command.

Ranging

The Ranging instructions (GREATER THAN, LESS THAN, FROM ____ to ____) may be used with Entry Dates (ED).

6.11 BACKFILE POSTINGS (B#)

Four fields in the MESH VOCABULARY FILE unit record, B6, B9, B2, and B5, give the postings a term has in BACK66, BACK69, BACK72, and BACK75 respectively. Each field has two entries: the total postings and the IM postings, indicated by an asterisk (*). These fields are not directly searchable, but print out in response to a "PRINT FULL or a "PRINT DETAILED command.

PART 7 MEDLINE

7.1 INTRODUCTION

The MEDLINE file covers Index Medicus plus all of the "special list" journals published in the current and two preceding years. The number of citations in MEDLINE ranges from 380,000 to 630,000. The articles are from approximately 3,000 journals published in the U.S. and some 70 foreign countries. Also included are citations to chapters and articles from selected monographs.

7.2 ENTERING THE MEDLINE FILE

Most users of the NLM on-line network are automatically placed in the MEDLINE file after logging in. However, when you are in another ELHILL file, and you wish to enter or re-enter MEDLINE, enter the command "FILE MEDLINE.

7.3 MEDLINE UNIT RECORD

The MEDLINE unit record is the computer-stored information representing one journal article or monograph chapter. The table below lists the data elements, with their two-letter category qualifiers, that make up each unit record.

The MEDLINE Unit Record

NAME OF ELEMENT	CATEGORY QUALIFIER	DIRECTLY SEARCHABLE	"PRINT"	"PRINT FULL"	"PRINT DETAILED"
ABSTRACT	AB				X
ABSTRACT SOURCE	AS	X		X	X
AUTHOR	AU	X	X	X	X
CALL NUMBER	CA	X			X
CITATION IDENTIFIER	CI			X	X
CITATION NUMBER	CN	X			X
ENGLISH ABSTRACT INDICATOR	EA				X
ENTRY DATE	ED	X			X
INDEX MEDICUS ISSUE	IM	X			X
ISSN	IS	X			X
ISSUE/PART/SUPPLEMENT	IP				X
JOURNAL SUBSET	SB	X			X
JOURNAL TITLE ABBREVIATION	TA	X			X
JOURNAL TITLE CODE	JC	X			X
LANGUAGE	LA	X		X	X
LAST MAJOR REVISION	LV				X
MAIN HEADINGS	MH	X		X	X
MESH CLASS NUMBER	MC				X
NO-AUTHOR INDICATOR	NA				X
NUMBER OF REFERENCES	NR				X

NAME OF ELEMENT	CATEGORY QUALIFIER	DIRECTLY SEARCHABLE	"PRINT"	"PRINT FULL"	"PRINT DETAILED"
PAGINATION	PG				X
PLACE OF PUBLICATION CLASS NUMBER	PN	X			X
PUBLICATION DATE	PD	X			X
REVISION DATE	VD				X
REVISION INDICATOR	RI				X
SOURCE	SO		X	X	X
SPECIAL LIST INDICATOR	LI	X			X
SUBHEADINGS	SH	X		X	X
SUBJECT AS A NAME	SU	X			X
TITLE	TI		X	X	X
VERNACULAR/TRANSLITERATED TITLE	TT				X
VOLUME/ISSUE	VI				X
YEAR OF PUBLICATION	YP	X			X

Following are sample "PRINT DETAILED unit records for a journal article and a monograph chapter.

Journal Article:

AU - SHEPELEVSEVA NG
TI - [EFFECT OF THE ANTHRACYCLINE ANTINEOPLASTIC ANTIBIOTICS,
RUBOMYCIN AND CARMINOMYCIN, ON THE GLYCOGEN AND NUCLEIC ACID
CONTENT IN THE MYOCARDIUM OF WHITE MICE]
LA - RUS
MH - ANIMAL
MH - ANTIBIOTICS, ANTINEOPLASTIC/*PHARMACODYNAMICS
MH - CARMINOMYCIN/*PHARMACODYNAMICS
MH - COMPARATIVE STUDY
MH - DAUNOMYCIN/*PHARMACODYNAMICS
MH - DOSE-RESPONSE RELATIONSHIP, DRUG
MH - DNA/*METABOLISM
MH - ENGLISH ABSTRACT
MH - FEMALE
MH - GLYCOGEN/*METABOLISM
MH - HEART/*DRUG EFFECTS
MH - MICE
MH - MYOCARDIUM/*METABOLISM
MH - RNA/*METABOLISM
MH - TIME FACTORS
ED - 770917
PD - JUN 77
IS - 0003-5637
TA - ANTIBIOTIKI
CN - 77240754
PG - 553-7
SB - M

PN - Z1.252.878
PN - Z1.542.248.883
PN - Z1.542.938

EA - A

TT - VLTIANIE ANTRATSIKLOVYKH PROTIVOOPUKHOLEVYKH ANTIBIOTIKOV
FUBOMITSINA I KARMINOMITSINA NA SODERZHANIE FLIKOGENA I
NUKLEINOVYKH KISLOT V SERDECHNO: I MYSHTSE BELYKH MYSHE: I.

VI - 22

JC - 6GC

AS - AUTHOR

AB - THE EFFECT OF 2 ANTHRACYCLINE ANTIBIOTICS, I.E. RUBOMYCIN AND KARMINOMYCIN ON THE CONTENT OF GLYCOGEN, RNA AND DNA IN THE CARDIAC MUSCLE OF ALBINO MICE WAS STUDIED ON THEIR FIVE-FOLD INTRAVENOUS ADMINISTRATION ONCE EVERY 5 DAYS IN EQUIEFFECT DOSES BY THE LETHAL OUTCOME. IT WAS FOUND THAT UNDER THE EFFECT OF THE ABOVE ANTIBIOTICS ACCUMULATION OF GLYCOGEN IN THE CARDIAC MUSCLE OF MICE TOOK PLACE, THIS WAS MOST PRONOUNCED IN THE ANIMALS TREATED WITH KARMINOMYCIN IN DOSES OF 2.15 MG/KG. A DECREASE IN THE ABSOLUTE CONTENT OF RNA AND DNA IN THE MOUSE HEART AFTER THE FIRST 4 ADMINISTRATIONS AND IN THE RATIO OF RNA TO DNA WAS OBSERVED AS COMPARED TO THE ANALOGOUS VALUES IN THE CONTROL ANIMALS AT THE ACCOUNT OF A MORE INTENSIVE DECREASE IN THE CONTENT OF RNA THAN THAT OF DNA.

CI - 0003-5637 22:553 77

SO - ANTIBIOTIKI 22(6) :553-7, JUN 77

Monograph Chapter:

AU - SACHAR EJ

AU - GRUEN PH

AU - ALTMAN N

AU - LANGER G

AU - HALPERN FS

AU - LIEFER M

TI - PROLACTIN RESPONSES TO NEUROLEPTIC DRUGS: AN APPROACH TO THE STUDY OF BRAIN DOPAMINE BLOCKADE IN HUMANS. PP. 242-9.

LA - ENG

MH - ANTIDEPRESSIVE AGENTS/PHARMACODYNAMICS

MH - BIOLOGIC AVAILABILITY

MH - BRAIN/*DRUG EFFECTS

MH - DOPAMINE/METABOLISM/PHYSIOLOGY

MH - DOSE-RESPONSE RELATIONSHIP, DRUG

MH - DRUG EVALUATION

MH - DRUG TOLERANCE

MH - EXTRAPYRAMIDAL DISORDERS/CHEMICALLY INDUCED

MH - HUMAN

MH - HYPOTHALAMUS/PHYSIOLOGY

MH - MONOGRAPH

MH - PARASYMPATHOMIMETICS/PHARMACODYNAMICS

MH - PATIENT COMPLIANCE

MH - PHENOTHIAZINE TRANQUILIZERS/PHARMACODYNAMICS

MH - PROGNOSIS

MH - PROLACTIN/*SECRETION

MH - PSYCHOTROPIC DRUGS/PHARMACODYNAMICS

MH - RECEPTORS, DOPAMINE/*DRUG EFFECTS

MH - REVIEW
MH - SCHIZOPHRENIA/METABOLISM
MH - TRANQUILIZING AGENTS/ADVERSE EFFECTS/*PHARMACODYNAMICS
MH - UNITED STATES GOVERNMENT SUPPORTED, NON-N.I.H.
ED - 770917
TA - IN: USDIN E, ET AL., ED. NEUROREGULATORS AND PSYCHIATRIC DISORDERS. NEW YORK, OXFORD UNIV PRESS, 1977. WM 100 N494 1976.
CN - 77228949
NR - 37
JC - IDM
CA - WM 100 N494 1976
CI - :
SO - IN: USDIN E, ET AL., ED. NEUROREGULATORS AND PSYCHIATRIC DISORDERS. NEW YORK, OXFORD UNIV PRESS, 1977. WM 100 N494 1976.

The following is a description of each of the data elements in the unit record. It should be remembered that not all of the data elements described below are present in every unit record. Where a particular data element is missing from a unit record its category qualifier will not be displayed by a "PRINT command.

7.3.1 ABSTRACT (AB)

Abstracts (which include summaries but not conclusions) are added to the unit record when publishers have given NLM permission to use them. The abstract is input directly from the article. If the article does not contain an abstract, NLM does not create one. Abstracts were added at the beginning of 1975. Words from abstracts may be searched as text words. All abstracts are in English. If a foreign language article contains a substantive English language abstract, the term ENGLISH ABSTRACT is added to the Main Heading field. The abstract is input only if it contains fewer than 200 words.

7.3.2 ABSTRACT SOURCE (AS)

At present, all articles having abstracts included in the unit record have the word AUTHOR entered in the AS field. This indicates that the abstract in the record is the one written by the author or editor of the article, and printed with the article. This field is directly searchable as AUTHOR (AS).

7.3.3 AUTHOR (AU)

Every author of each journal article or monograph chapter is included in the data base and all are directly searchable. Authors are entered last name first, space, followed by one or two initials, space, followed by JR or SR (for Junior or Senior) or I or II, if applicable. Any letter modified by a diacritical mark in the original language will be printed on-line with a colon (:) immediately preceding it, e.g.:

AU - STASI:NSKI T
AU - W:OJTOWSKA E

However, when entering authors' names for searching, all diacritical marks are ignored by the user. The above authors would be searched as:

STASINSKI T AND WOJTOWSKA E

The truncation symbol (:) and the single variable character symbol (#) should be used when there is uncertainty about the spelling of author's name or the correct initials. For example:

SMYTH# RR
GOTTSEGEN:
JONES W#
ABLE :

In an offline printout, the author's name will be printed with the correct dia-critical mark appearing before the letter to which it applies:

AU - W'OJTOWSKA E

7.3.4 CALL NUMBER (CA)

This field contains the NLM call number when the record is for a monograph. The call number is directly searchable and printable. For example:

W3 TE75 1976T (CA)

Print format:

CA - W3 TE75 1976T

7.3.5 CITATION IDENTIFIER (CI)

Citations to journal articles have been assigned unique identification numbers called Citation Identifiers. These numbers consist of:

- 1) The International Standard Serial Number (ISSN) for the journal in which the article was published.
- 2) The volume number of the journal.
- 3) The number of the first page of the article
- 4) A two-digit number for the year in which the article was published.

For example:

CI - 0022-4804 22:513 77

The Citation Identifier is a composite field and cannot be searched either directly or STRINGSEARCHed. It can, however, be displayed with a "PRINT command. Citations to monograph chapters do not have a citation identifier.

7.3.6 CITATION NUMBER (CN)

This is a sequential accession number assigned to each citation entered into the data base. It is directly searchable and can also be searched using the ranging capability. (See PART 4 of this Manual).

For Example:

77240754 (CN)
PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
"PRT CN
PROG:
CN - 77240754

7.3.7 ENGLISH ABSTRACT INDICATOR (EA)

Foreign language articles with a substantive English language abstract have the letter "A" entered in this field, whether or not the abstract has been input to the system. An entry in this field causes the phrase "Eng. Abstr." to appear in the citation in published bibliographies such as Index Medicus.

7.3.8 ENTRY DATE (ED)

This is a six-digit number in the form (YYMMDD) indicating the date the citation was entered into the MEDLARS system. October 4, 1977 would appear as 771004. The entry date is not identical to the Publication Date, the Year of Publication, or IM Date.

Entry dates can be searched alone to obtain the total number of citations input to the system on any date or during a given time period. For example:

770917 (ED)
PROG:
SS (1) PSTG (7889)

or

ALL 7709: (ED) Note: Must use qualifier (ED)
PROG:
SS (1) PSTG (23482)

Ranges of entry dates can also be searched using the ranging search capability (see PART 4). For example, the following search would give the total number of citations dealing with Thoracic Radiography entered into the system from January 1 through March 31, 1977

THORACIC RADIOGRAPHY AND FROM 770101 TO 770331
PROG:
SS (1) PSTG (41),

The entry date can also be combined with other searchable categories, such as Main Headings, to restrict the search to a specific time frame. The word ALL preceding the Entry Date will preclude the Multi-Meaning message.

THORACIC RADIOGRAPHY AND ALL 7709: (ED) Note: Must use qualifier (ED)
PROG:
SS (1) PSTG (6)

7.3.9 INDEX MEDICUS ISSUE (IM)

The issue of the monthly Index Medicus (also the SDILINE month) in which the citation appeared is in this field as a 4-digit number in the form (YYMM), e.g., 7708 indicates the August 1977 issue. For example:

SEARCH HINT: USING DATE OF ENTRY (DA) RANGES
Patricia E. Healy and Lou S. Knecht
MEDLARS Management Section, NLM

Enclosed as Appendix A are the Date of Entry (DA) ranges for the MEDLINE databases (MED66, MED71, MED75, MED77, MEDLINE). These date ranges correspond to the Index Medicus (IM) year (i.e., a particular annual issue of IM indexed using a particular year's version of the MeSH Vocabulary). These ranges do not necessarily include all the Dates of Entry (DA) actually present in each of these MEDLINE databases. This discrepancy between the Index Medicus date ranges and the actual database date ranges occurs because of the way the backfile databases are created. The MED66 and MED71 backfiles were created by segmenting on the IM Dates of Entry. However, since MED75, citations for backfiles are generally "pulled" by Year of Publication (YR). Therefore, a 1976 citation indexed for Index Medicus in 1977 (meaning it has a 1977 IM Date of Entry) appears in MED75 on the basis of its year of publication; its Date of Entry (DA), however, will be greater than the "official" IM Dates of Entry for MED75.

NOTE: Throughout this article, "Index Medicus year" refers to the year as it is reflected in the MEDLINE database. In MEDLINE, these date ranges include more citations than would be found in a particular annual Index Medicus issue for a subject search. The additional citations come from two sources: 1) journals indexed for the Special Lists (e.g., International Nursing Index, Index to Dental Literature) but not included in Index Medicus, and 2) minor descriptors, and headings that are not the main point of the article (i.e., headings without an asterisk (*)). While citations with these headings are not printed in IM, they are searchable online. Therefore, there may not always be a one-to-one correspondence between an issue of Index Medicus and MEDLINE. Nevertheless, the actual Index Medicus "pull" dates are valid for all citations in MEDLINE regardless of whether or not the citation is an IM citation.

What this means for the searcher is:

1. If you are using the Date of Entry (DA) ranges to segment a MEDLINE database, only the ranging instructions GREATER THAN or LESS THAN should be used. For instance, if you knew a search statement in an OFFSEARCH was going to retrieve more than 500 citations (the OFFSEARCH print limit per search statement is 500 citations), and you wanted all these citations printed, entry dates are one way to segment the retrieval. An example of segmenting a MED75 search statement retrieval in an OFFSEARCH might be:

STS SS 4/C?
USER:
3 AND LESS THAN 751120 (DA)

STS SS 5/C?
USER:
3 AND GREATER THAN 751119 (DA)

In the SSNOS/OVRIDES? part of the OFFSEARCH, printing of search statements 4, 5 should be requested, rather than printing of search statement 3. (NOTE: Both GREATER THAN or LESS THAN ranging instructions are exclusive, meaning the Date of Entry used with the instruction is not searched. Searching begins at the Date of Entry following or preceding this number. Using the LESS THAN and GREATER THAN strategies neatly divides the retrieval into two parts from the middle regardless of the actual Dates of Entry at either end.)

2. If you are using the Date of Entry (DA) ranges to limit a MeSH Heading search to the Index Medicus years when the heading was valid (e.g., you are searching all the backfiles and the MeSH Heading became a valid search term in 1979), any of the ranging instructions may be used (GREATER THAN _____, LESS THAN _____, FROM _____ TO _____ (DA)). Due to the manner in which the backfiles are created, however, it is expeditious, in most cases, to search Dates of Entry using the LESS THAN or GREATER THAN instructions rather than the FROM _____ TO _____ instruction. This will ensure complete retrieval of all the citations on a subject in MEDLINE or one of its backfiles. (The limitations of the FROM _____ TO _____ (DA) instruction will be discussed later.)

A search for DIZZINESS, which became a MeSH Heading in 1979, illustrates this procedure across MEDLINE and MED77. In MEDLINE (currently 1980 forward coverage), the strategy would simply be:

SS 1/C?
USER:
DIZZINESS

In MED77, however, two strategies would be needed:

SS 1/C?
USER:
A) DIZZINESS

Retrieves all citations indexed with DIZZINESS for 1979 IM or for 1980 IM, or 1981 citations having a publication year of less than 1980, and hence contained in MED77. No need to use a GREATER THAN statement here.

B) SS 2/C?
USER:
(TW) DIZZY OR DIZZINESS

SS 3/C?
USER:
VERTIGO AND LESS THAN 781118 (DA)

SS 4/C?
2 AND 3

VERTIGO may sometimes have been used for DIZZINESS before 1979. (Possible previous Indexing for DIZZINESS may be found in the PI field of the DIZZINESS record in the MeSH Vocabulary File.) The LESS THAN statement limits VERTIGO to before 1979 IM. Combining with Text Words for DIZZINESS isolates pertinent citations, and helps eliminate false drops.

SS 5/C?
2 AND NOT 4

The requester may also be interested in this subset of citations with relevant Text Words that were not, however, indexed with the MeSH Heading, VERTIGO. This strategy retrieves this subset, but is optional.

Strategy A would retrieve citations to articles indexed with the new term DIZZINESS which came into the system in 1979. (Dates of Entry (DA) for the Index Medicus year 1979 are 781118 through 791026. Dates of Entry greater than the 791026 may be retrieved, however, because articles indexed in the 1980 or 1981 Index Medicus year, with a publication date of 1979, would have been "pulled" from MEDLINE for the backfile MED77.) Strategy B would retrieve citations to articles having titles or abstracts that contain the Text Words DIZZY or DIZZINESS (you may be able to think of additional Text Words to express this concept yourself), and were also indexed to VERTIGO, the heading under which citations to dizziness were indexed prior to 1979. Only citations input into the database in Index Medicus years less than 1979 would be retrieved.

Earlier it was mentioned that there were limitations to the use of the ranging instruction FROM _____ TO _____ (DA). Basically, the instruction FROM _____ TO _____ (DA) is most useful when searching for one specific Index Medicus year, and may have to be repeated in a second database to capture the entire IM coverage. This is because the backfiles MED75 forward were pulled by Year of Publication; therefore an "IM issue" may span one or more backfiles. For example, a heading introduced in 1977 for which you want to see the retrieval for IM 1977 would require the following steps online:

File MED77
PROG:
YOU ARE NOW CONNECTED TO THE BACK77 FILE.

SS 1 /C?
USER:
SAVESEARCH
PROG:
ENTER SEARCH-

STS SS 1 /C?
USER:
INFANT, LOW BIRTH WEIGHT
PROG:
SS (1) PSTG (874)

STS SS 2 /C?
USER:
1 AND FROM 761104 TO 771031 (DA)
PROG:
SS (2) PSTG (170)

STS SS 3 /C?

USER:

FINISHED

PROG:

SEARCHNAME?

USER:

1977 IM INFANT LBW

PROG:

SEARCH SET FROM SS 1 SAVED AS '1977 IM INFANT LBW'.
SAVESEARCH COMPLETED.

SS 3 /C?

USER:

FILE MED75

PROG:

YOU ARE NOW CONNECTED TO THE BACK75 FILE.

SS 1 /C?

USER:

1977 IM INFANT LBW (SN)

PROG:

TIME OVFLW: CONT? (Y/N)

USER:

Y

PROG:

SS (1) PSTG (85)

A total of 255 citations for 1977 IM year was retrieved for the term INFANT, LOW BIRTH WEIGHT. This would closely correspond to the number of citations that would be found under this heading in the published version of Cumulated Index Medicus, 1977 (CIM). There would not be a one-to-one correspondence, however, because CIM would not include citations from the Special Lists (Nursing, Dental, etc.) that may be retrieved in any MEDLINE search and would not include articles indexed to INFANT, LOW BIRTH WEIGHT where this concept was not a main point of the article (i.e., the heading was not asterisked (*)).

PLEASE TYPE NEWS TO SEE THE MOST RECENT NEWS ITEMS ONLINE

7711

PROG:

SS (1) PSTG (19990)

7.3.10 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN for a journal is directly searchable. This data element is always an eight-digit number in the form: 0000-0000. The Journal Title Code (JC) and Journal Title Abbreviation (TA) are other data elements for identifying the journal. The ISSN can be used to locate all the articles in the data base from one journal or to restrict a search to one journal. For example, the following search was restricted to articles from the British journal Archives of Oral Biology (ISSN 0003-9969):

DENTAL CAVITIES AND 0003-9969 (IS)
PROG:
SS (1) PSTG (45)

Note: Must use qualifier (IS)

ISSN's may be obtained from SERLINE or from the printed List of Journals Indexed in Index Medicus. See also descriptions of the Journal Title Code (JC) and the Journal Title Abbreviation (TA) data elements.

7.3.11 ISSUE/PART/SUPPLEMENT (IP)

This data element identifies the issue, part, or supplement of the journal in which the article was published. If the journal has no volume number, the issue number will appear in the Volume/Issue data element (VI) and the IP data element will contain information on the part or supplement, if applicable. For example, the IP field for volume 1 issue no. 8033 of Lancet will look as follows: IP - 8033.

7.3.12 JOURNAL SUBSET (SB)

If the journal in which the article was published belongs to a subset of MEDLARS journals, a one-letter tag has been added to this data element. At present there are two such tags:

A - The journals included in the Abridged Index Medicus

M - The subset of about 1100 Index Medicus journals which formerly constituted the entire MEDLINE data base.

These tags are directly searchable and may be displayed with a tailored "PRINT" command:

ANTICONVULSANTS AND A (SB)

PROG:

TIME OVFLW: CONT? (Y/N)

USER:

Y

PROG:

SS (15) PSTG (128)

7.3.13 JOURNAL TITLE ABBREVIATION (TA)

A standard abbreviation for the journal in which the article was published is entered in this data element. It is the abbreviation used in Index Medicus, the List of Journals Indexed in Index Medicus and the other NLM-sponsored recurring bibliographies. It also appears as the first part of the Source field (S0). It is directly searchable:

BR MED J (TA)

PROG:

SS (6) PSTG (6846)

In unit records for monographs in MEDLINE, the TA field contains complete author/editor, title, volume imprint and call number information, and is identical to the Source (S0) field.

TA - IN: LITWIN SD, ET AL., ED. CLINICAL EVALUATION OF IMMUNE FUNCTION IN MAN. NEW YORK, GRUNE & STRATTON, 1976. W3 IR72 1976C.

7.3.14 JOURNAL TITLE CODE (JC)

Each journal indexed in MEDLARS has been assigned a unique three-character code. The code for the journal in which the cited article was published appears in this data element. JC's can be retrieved from the SERLINE data base. JC's are directly searchable, and either the Journal Title Code, the International Standard Serial Number, or the Journal Title Abbreviation can be used to limit a search to one or more specific journal titles. For example, a search on Heart Diseases could be limited to JAMA, the Journal of the American Medical Association in the three ways illustrated below:

SS 1 /C?

USER:

HEART DISEASES AND KFR (JC)

Journal Title Code

PROG:

SS (1) PSTG (13)

SS 2 /C?

USER:

HEART DISEASES AND 0002-9955 (IS)

ISSN

PROG:

SS (2) PSTG (13)

SS 3 /C?

USER:

HEART DISEASES AND JAMA (TA)

Journal Title Abbreviation

PROG:

SS (3) PSTG (13)

7.3.15 LANGUAGE (LA)

The language of an article is directly searchable. All languages are entered as three-letter abbreviations. This abbreviation usually consists of the first three letters of the full word. The following search was restricted to French language articles:

THORACIC INJURIES AND FRE (LA)

PROG:

SS (1) PSTG (49)

English language articles may be searched using similar strategy: AND ENG. The abbreviation FOR has been devised to retrieve or negate all foreign articles. The following search negates all foreign articles.

THORACIC INJURIES AND NOT FOR (LA)

PROG:

SS (1) PSTG (318)

7.3.16 LAST MAJOR REVISION (LV)

This data element contains the date of the most recent revision to the unit record which was of sufficient importance to require that the record be re-published in Index Medicus or another recurring bibliography. This six-digit date is displayed in the form (YYMMDD). May 5, 1978 would be entered as 780505. See also the Revision Indicator data element (RI).

7.3.17 MAIN HEADINGS (MH)

Main Headings are indexing terms from Medical Subject Headings (MeSH), including geographic headings, check tags, and minor descriptors. Main Headings should be entered exactly as they appear (with punctuation, spacing, etc.) in MeSH and the other vocabulary tools. Main Headings may be searched alone or in combination with one or more valid subheadings. (See Subheadings (SH) data element.) Main Headings or Main Heading/subheading combinations may be preceded by an asterisk (*) to retrieve only articles in which the requested heading is a major point. This is a useful way of limiting retrieval as the following example illustrates:

HEART

PROG:

SS (11) PSTG (7533)

SS 12 /C?

USER:

*HEART

PROG:

SS (12) PSTG (4221)

7.3.18 MESH CLASS NUMBER (MC)

This alpha-numeric indicates the position of each Main Heading in the hierarchical arrangement of MeSH terms called MeSH Tree Structures. MeSH Class Numbers are directly searchable and are used primarily in the EXPLODE search capability. The MeSH Class Number(s) for any Main Heading in MeSH can be displayed on-line using the "MESHNO" or "TREE" commands.

Example:

"MESHNO HEART

PROG:

HEART

A7.541

"TREE HEART

PROG:

CARDIOVASCULAR SYSTEM A7

HEART A7.541

ENDOCARDIUM A7.541.207

FETAL HEART A7.541.278 (*)

HEART ATRIUM A7.541.358

HEART CONDUCTION SYSTEM A7.541.409 (*)

HEARTSEPTUM A7.541.459

HEART VALVES A7.541.510 (*)

HEART VENTRICLE A7.541.560

MYOCARDIUM A7.541.704

PERICARDIUM A7.541.795

7.3.19 NO-AUTHOR INDICATOR (NA)

If the article was written anonymously, this field contains the letter A:

NA - A

7.3.20 NUMBER OF REFERENCES (NR)

If the article is a review of the literature, the number of bibliographic references in the article is given in this field. All review articles have the word REVIEW listed as one of the Main Headings (MH).

Print format:

NR - 87

7.3.21 PAGINATION (PG)

This data element indicates the inclusive pages of the article in the journal in which it was originally published. It is displayed in a tailored "PRINT" command and also as the fourth part of the Source (S0) data element.

Print format:

PG - 553-7

7.3.22 PLACE OF PUBLICATION CLASS NUMBER (PN)

This alpha-numeric is the MeSH Class Number assigned to the geographic heading for the place of publication of the journal (usually countries only). It is possible either to enter a place of publication class number as a single search

term or explode it. For example, both of the following searches will retrieve all articles published in the Far East:

SS 1 /C?

USER:

ALL Z1.252.474: (PN)

PROG:

SS (1) PSTG (34151)

SS 2 /C?

USER:

EXP Z1.252.474: (PN)

PROG:

SS (2) PSTG (34151)

Note the placement of the colon (:) after the tree number and the inclusion of (PN) as a qualifier; these are required.

The MeSH Class Number for a place of publication can be displayed by using the "MESHNO command.

For Example:

"MESHNO POLAND

PROG:

Z1.542.248.679

Note: Must not use qualifier (PN)

7.3.23 PUBLICATION DATE (PD)

The full date on which the issue of the journal was published is given in this field. This date varies greatly in its format and appears in the unit record exactly as it appears on the journal or monograph. The following examples illustrate the variety of formats found in this field:

PD- 12 NOV 77

PD- OCT 1977

PD- 1977

PD- FALL 77

This element also appears as the last part of the Source (S0) field.

7.3.24 REVISION DATE (VD)

If any changes have been made in the unit record, the date of the last revision appears in this data element in the form YYMMDD.

Print format:

VD - 770315

(March 15, 1977)

This data element should not be confused with the Last Major Revision (LV) data element. An entry in this field does not cause the citation to be republished.

7.3.25 REVISION INDICATOR (RI)

If the original citation has received a revision which is of sufficient importance to require that it be republished in Index Medicus or another recurring bibliography, the following data element is added:

RI - (REV.)

An entry in this field causes the citation to be republished under its appropriate name headings with the word (REV.) in the citation. The Last Major Revision (LV) data element gives the date on which this revision took place.

7.3.26 SOURCE (SO)

For journal articles, this is a composite field containing information from five other data elements:

- 1) Journal Title Abbreviation (TA)
- 2) Volume/Issue (VI)
- 3) Issue/Part/Supplement (IP)
- 4) Pagination (PG)
- 5) Publication Date (PD)

Example:

SO - J Surg Res 22(5):513-20, May 77
(1) (2)(3) (4) (5)

For monographs, this field includes author/editor, title, volume, imprint and call number and is identical to the TA field. Because the Source field is a composite, it cannot be searched either directly or with STRINGSEARCH. It can however, be displayed with a "PRINT" command.

7.3.27 SPECIAL LIST INDICATOR (LI)

The Special List Indicators identify articles indexed from certain non-Index Medicus journals. Citations from five "Special Lists" are available for searching in MEDLINE, SDILINE and the BACKFILES, but do not appear in Index Medicus. There are 6 one-letter codes in this field of the unit record and each is directly searchable:

C = articles from non-Index Medicus journals in the communication disorders field, used to augment MEDLARS data base.

D = articles from non-Index Medicus dental journals used to augment the Index to Dental Literature.

F = articles from non-Index Medicus foreign journals used to augment the the MEDLARS data base for the special needs of foreign MEDLARS centers.

H = articles from non-Index Medicus health care journals used to augment the Hospital Literature Index.

N = articles from non-Index Medicus nursing journals used to augment International Nursing Index.

R = articles from non-Index Medicus reproduction journals used to augment Population Sciences.

7.3.28 SUBHEADINGS (SH)

Although subheadings are always assigned to combination with a Main Heading by the indexer, they may be searched alone or in combination with Main Headings. They can only be printed with the Main Headings, however.

Subheadings provide for greater specificity and/or for limiting the number of retrieved citations. The use of each subheading is limited in indexing to specified subcategories of Main Headings by MeSH definition and NLM indexing policy.

7.3.28.1 SEARCHING SUBHEADINGS

Subheadings may be entered either by spelling out the entire word or phrase or by using the standard two-character abbreviation. For the sake of clarity, subheadings will be spelled out in all the examples which follow except the first one.

- 1) alone - the subheading abbreviation is entered followed by the category qualifier. Example:

TR (SH)

This will retrieve all citations in which the subheading /transplantation was used regardless of the Main Heading to which it was appended. It is not possible to use the asterisk to limit retrieval when searching on subheadings alone. A NO POSTINGS message will result if the subheading is spelled out.

- 2) in combination -

- (a) The subheading is entered following Main Heading with no category qualifier. Example:

HEART/TRANSPLANTATION

This will retrieve all citations in which the subheading was used only in combination with the Main Heading HEART.

- (b) Multiple subheadings may be combined with one or more Main Headings by using the "SUBHEADINGS APPLY" command. Example:

"SUBHEADINGS APPLY METABOLISM, ENZYMOLOGY, PHYSIOLOGY

PROG:

SUBHEADINGS ACCEPTED

SS 1 /C?

USER:

EXP KIDNEY OR RENAL ARTERY OR RENAL VEINS

PROG:

SS (1) PSTG (7984)

SS 2 /C?

USER:

"SUBHEADINGS CANCEL

This will retrieve all citations which have been indexed with any one of the specified subheadings in combination with any one of the specified Main Headings. Print Indicators (asterisks) may be used with Main Heading/subheading combinations but must precede the Main Heading. Example:

*HEART/TRANSPLANTATION

or

"SUBS APPLY

EXP *KIDNEY OR *RENAL ARTERY OR *RENAL VEINS

7.3.28.2 PRINTING SUBHEADINGS

Subheadings are printed only in combination with the Main Heading to which they are appended and are always included when printing Main Headings. It is not possible to print one without the other, i.e., Main Headings without subheadings or subheadings without Main Headings.

When more than one subheading has been assigned to the same Main Heading, the subheadings are concatenated following the Main Heading. This is done to conserve space. Example:

MH - *VAGUS NERVE
MH - VAGUS NERVE/PATHOLOGY
MH - VAGUS NERVE/SURGERY

is concatenated to become

MH - *VAGUS NERVE/PATHOLOGY/SURGERY

The asterisk indicates that the citation appeared in Index Medicus under VAGUS NERVE with no subheading. If the citation had appeared in Index Medicus under VAGUS NERVE/PATHOLOGY the print format would be: MH - VAGUS NERVE/*PATHOLOGY/SURGERY. Please note that asterisks (*) may precede subheadings when printing but can only precede Main Headings when searching.

7.3.29 SUBJECT AS NAME (SU)

When an article contains a biographical note or obituary, or is entirely about the life or work of an individual or individuals, their names will appear in this data element as subjects of the article. The names can be searched directly and are displayed in exactly the same form as Authors, i.e., last name - space - two initials - space JR or SR or II or III, if used. In the past, biographees' names were enclosed in parentheses; this is no longer true. To limit a search to articles written about a person, add the category qualifier (SU) after the name:

EINSTEIN A: (SU)

7.3.30 TITLE (TI)

This data element contains the complete title of the journal article or monograph chapter. Words in the title may be searched using text words. Titles always appear in English. Foreign language titles are translated and enclosed in

brackets. For monograph chapters, the paging of the chapter is included at the end of the title.

Example: Journal article

TI - [HEMOLYTIC SYNDROME IN A PATIENT WITH IMPLANTED ARTIFICIAL HEART VALVES]

Example: Monograph chapter

TI - PROLACTIN RESPONSES TO NEUROLEPTIC DRUGS: AN APPROACH TO THE STUDY OF BRAIN DOPAMINE BLOCKADE IN HUMANS. PP. 242-9.

7.3.31 VERNACULAR/TRANSLITERATED TITLE (TT)

This data element contains the title of each foreign language article in the vernacular, or a transliteration if the foreign language does not use the Roman alphabet. This element can be displayed with a tailored "PRINT command:

Transliterated Title:

"PRT INCLUDE TT
PROG:

AU - AFANAS'EV IUI
AU - NOZDRIN VI
TI - [REGULATION OF CELL STRUCTURE AND FUNCTION]
TT - REGULIATSIIA STRUKTURY I FUNKTSII KLETKI.
SO - USP SOVREM BIOL 83(3):400-18, MAY-JUN 77

Vernacular Title:

"PRT 1 INCLUDE TT
PROG:

1
AU - VENDRY:ES P
TI - [THE AUTO GENESIS OF THE CELL AND THE THEORY OF EVOLUTION
(AUTHOR'S TRANSL)]
TT - L'AUTOGEN:ESE DE LA CELLULE ET LA TH:eorie DE L':EVOLUTION
SO - BULL BIOL FR BELG 110(3):253-82, 1976

7.3.32 VOLUME/ISSUE (VI)

The Volume/Issue data element identifies the volume, or if there is no volume number, the issue of the journal in which the article was published. This information also appears as the second part of the Source (SO) data element. See also the Issue/Part/Supplement (IP) data element.

7.3.33 YEAR OF PUBLICATION (YP)

The last 2 digits of the year in which the journal article was published are entered in this field. These dates are directly searchable and can be combined with other searchable elements to restrict a search to articles published in a

given year. For example, the following search will retrieve articles published in 1977:

MICROELECTRODES AND 77 (YP)
PROG:
SS (1) PSTG (53)

The year of publication cannot be searched using the ranging capability. If a range of years is desired, the individual years should be searched separately and then combined. For example, the above search could be expanded to include the years 1976 and 1977:

SS 1 /C?
USER:

MICROELECTRODES AND 77 (YP)

PROG:
SS (1) PSTG (53)
SS 2 /C?
USER:

MICROELECTRODES AND 76 (YP)

PROG:
SS (2) PSTG (123)
SS 3 /C?
USER:

1 OR 2

PROG:
SS (3) PSTG (176)

7.4 MEDLINE "PRINT COMMANDS

There are three standard "PRINT commands in MEDLINE. They are listed below with their abbreviations and the data elements which will be displayed with each:

1) "PRINT or "PRT

AU - Author
TI - Title
SO - Source

2) "PRINT FULL or "PRT FU

AU - Author
TI - Title
LA - Language
MH - Main Headings
SO - Source
CI - Citation Identifier

3) "PRINT DETAILED or "PRT DL

AU - Author
TI - Title
CN - Citation Number
ED - Entry Date
IS - ISSN
LA - Language
PN - Place of Publication Class Number
MH - Main Headings
PD - Publication Date
LI - Special List Indicator
SO - Source
CI - Citation Identifier
AB - Abstract
AS - Abstract Source
TA - Journal Title Abbreviation
SU - Subject as a Name
JC - Journal Title Code

EA - English Abstract Indicator
JI - Journal Article Identifier
Supplementary Data Indicator
CC - Catalog Citation Number
VD - Revision Date
SB - Journal Subset
LV - Last Major Revision
IP - Issue/Part/Supplement
ME - Monograph Editor/Compiler
MT - Monograph Title
NA - No-Author Indicator
NR - Number of References
PG - Pagination
RI - Revision Indicator
TT - Vernacular/Transliterated Title
VI - Volume/Issue

All "PRINT commands will automatically display 25 lines plus the number of lines needed to complete the citation being printed at the 25th line. If you specify a large number of unit records, the first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified may be displayed by answering YES to each CONTINUE PRINTING? message.

Unit records are printed in reverse chronological order. Thus, citations to articles published most recently appear first and the oldest last.

Tailored "PRINT commands, including the Off-Line Print Option, may be constructed to meet almost any printing requirement.

7.5 SPECIAL FEATURES OF SEARCHING MEDLINE

MEDLINE may be searched in two ways: using the controlled vocabulary in the Medical Subject Headings, and through "free-text" searching. This dual capability is known as "two-tiered" searching.

7.5.1 CONTROLLED VOCABULARY SEARCHING

A complete description of the vocabulary appears in PART 6 of this Manual. Each item to be input to the data base is examined by an Indexer, who assigns MeSH headings. Thus, an item can be retrieved by subject whether or not a particular word appears in the title or abstract. Two other important features of this method of searching are the EXPLODE capability and use of the asterisk (*). The EXPLODE will retrieve all articles indexed to a given term, and also those indexed to a more specific term located under the EXPLODED term in the Tree structure. For example:

EXPLODE CARTILAGE

will retrieve general articles on cartilage and also those articles indexed to the specific terms: CARTILAGE, ARTICULAR, INTERVERTEBRAL DISK, LARYNGEAL CARTILAGES, EPIGLOTTIS, NASAL SEPTUM, SEMILUNAR CARTILAGES. The asterisk (*) is used to indicate subjects which are the main point of an article, and under

which headings the article will appear in Index Medicus. It may be used to limit retrieval to the most relevant citations.

7.5.2 TEXT WORD SEARCHING

Any word that has been accepted as a text word from the title or abstract data elements (see Text Word Term Generation portion of Part 4 of this Manual) is searchable using the (TW) mnemonic as a qualifier. Text words are always single words, unlike MeSH terms which may be phrases. To search for the Pasteur effect, for example, the text words PASTEUR (TW) AND EFFECT (TW) must be combined logically.

PASTEUR (TW) AND EFFECT (TW)

PROG:

SS (21) PSTG (26)

Since punctuation is generally deleted in text word term generation, a possessive form, such as SMITH'S, would be entered as SMITH (TW). Remember that all-numeric strings are deleted and cannot be retrieved as text words.

In text word searching, it is well to bear in mind the possible variations in spelling and word prefixes and suffixes, and to use the "NEIGHBOR command to find out the extent of such variations. The truncation (:) and single variable character symbol (#) may be used to retrieve varying forms of root words. In addition, since the advantage of indexing to specific MeSH terms is lost in free-text searching, the searcher must include synonyms, as different authors may have referred to the same concept using different words. Use of the hyphen may also be capricious, and one title may contain the term POLYVINYL while another may refer to POLY-VINYL, and all three terms would be needed to search for the concept:

SS 1 /C?

USER:

POLYVINYL (TW)

PROG:

SS (1) PSTG (217)

SS 2 /C?

USER:

POLY (TW) AND VINYL (TW)

PROG:

SS (2) PSTG (22)

SS 3 /C?

USER:

1 OR 2

PROG:

SS (3) PSTG (238)

Because the system deletes the hyphens and considers the hyphenated terms as unique words, POLY-VINYL becomes two words, POLY and VINYL.

When a user searching MEDLINE uses the ALL instruction, e.g., ALL LIVER, the program searches the Index for that exact term. All occurrences, TEXT Word, Main Heading, Title Abbreviation, etc. are retrieved. However, if the term is a "see" reference or an Entry Version, which requires mapping by the MeSH Vocabulary file, the term will not appear in the Index. Thus, the retrieval may not represent the entire set of possible citations. For this reason, users are advised to use only valid print versions of descriptors in the ALL instruction. For example, entering the term CANCER will retrieve citations with the descriptor NEOPLASMS, but entering ALL CANCER will retrieve only citations containing CANCER as a Text Word or Title Abbreviation.

7.6 SUBSETS OF MEDLINE

There are two subsets of MEDLINE: SDILINE and the BACKfiles. The BACKfiles are further divided into four parts. While SDILINE may be accessed on-line with the "FILE SDILINE command, the BACKfiles are accessible only through OFFSEARCH, fully described in PART 5.

7.6.1 SDILINE

This file (Selective Dissemination of Information on-LINE) covers the items input to MEDLINE for the most recent month. It usually contains about 20,000 records, and the entire file is replaced when the next month's records are input. The records available in SDILINE are also available in MEDLINE, with the exception that the SDILINE file will contain the Reprint Source (RP) and Place of Publication (PL) fields. All of the commands and search strategies used in searching MEDLINE may be used in SDILINE. Because of the limited size of the SDILINE file, one may often successfully EXPLODE terms that would cause overflows in MEDLINE Searching. Explosions at the second and third level (e.g., C4.619 is a second level explosion) will be possible, but many first level explosions (e.g., C4) will generally still not work. Text word searching is the same for both MEDLINE and SDILINE.

7.6.2 BACKFILES

There are four BACKfiles: BACK66, BACK69, BACK72 and BACK75. The BACK66 file contains 545,463 MEDLINE records input to the system between November 13, 1965 and November 11, 1968. The BACK69 file contains 649,346 MEDLINE records input to the system between November 17, 1968 and November 17, 1971. The BACK72 file contains 671,116 MEDLINE records input to the system between November 30, 1971 and November 19, 1974. BACK75 contains citations to articles published in 1975 and will grow to include 1976 and 1977 citations. At the end of each year, the records for the earliest year of the current MEDLINE file are "retired" to a BACKfile to make room for the coming year's citations. Thus, only citations with a publication date during the current year plus the past two years are in the MEDLINE file.

The BACKfiles may be searched only through OFFSEARCH. For complete information on the mechanics of searching these files, consult PART 5 of this Manual.

Abstracts were first input to MEDLINE in 1975; thus the three BACKfiles for 1972, 1969 and 1966 do not contain abstracts, and only the titles are "textracted" for text word searching. BACK75 does have abstracts in many citations. When searching with MeSH terms in the BACKfiles, it is important to know when a particular

term was introduced into the vocabulary. For example, a NO POSTINGS message might result from searching the BACK66 file with a term introduced in 1970. Useful tools for verifying terms include the Annotated MeSH, and the on-line MeSH Vocabulary File. The MeSH Vocabulary File contains history notes and entry dates for most terms. Because the Trees are restructured/renumbered in parts each year, explosions in the BACKfiles should be done with terms rather than tree numbers. If a term appears in more than one Tree, the program will retrieve records from all of them.

PART 8 CATLINE

8.1 INTRODUCTION

CATLINE is NLM's CATAlog-onLINE and represents all serials and monographs cataloged by NLM since 1965 and appearing in its Current Catalog. CATLINE contains about 177,000 citations, with approximately 10,000 citations added each year. It consists of works published after 1801 in any language but does not include Americana. CATLINE is updated weekly; therefore it contains the most up-to-date representations of NLM's cataloging.

8.2 COVERAGE AND CURRENCY

CATLINE represents the central data base from which most printed cataloging products are derived. The Weekly Proof sheets distributed by the Medical Library Association are photocomposed after the weekly update to CATLINE and include only the current 3 years of English language publications. The quarterly, annual, and quinquennial publications of Current Catalog are also photocomposed from CATLINE.

8.3 INTERNATIONAL STANDARD BIBLIOGRAPHIC DESCRIPTION FOR MONOGRAPHS (ISBD-M)

In January 1976, the Cataloging Section began using the International Standard for Bibliographic Description for Monographs (ISBD-M). Slashes, colons, and equals signs are the standard punctuation. For more comprehensive explanation of ISBD, see Chapter 6 of the Anglo-American Cataloging Rules (revised 1974). Records cataloged prior to 1976 are not in ISBD format and will not be changed.

8.4 ENTERING THE CATLINE FILE

To access CATLINE, enter the command FILE CATLINE after logging in to ELHILL at NLM.

8.5 CATLINE UNIT RECORD

The CATLINE unit record is the computer stored information representing one monograph or serial. The table below lists all the data elements with their two-letter Print qualifiers and two-letter Search qualifiers. The table also indicates which elements are directly searchable, and which will be displayed as a result of the standard PRINT commands for CATLINE.

The CATLINE Unit Record

NAME OF ELEMENT	TEXT WORD SEARCHING	SEARCHABLE	SEARCH QUALIFIER	PRINT QUALIFIER	PRT DETAILED	PRT FULL	PRT	PRT DN (drop notes)	PRT SE (series)	PRT NA (name)	PRT AC (acquisitions)
Main Heading Descriptor		*	MH	MH	X	X					
Topical		*	SH	MH	X	X					
Qualifier		*	SH	MH	X	X					
Others		*	SH	MH	X	X					
Country of Publication		*	CP	CP	X						
Country (Place) of Publication		*	PP	PP	X						
Tree Number		*	PP	PP	X						
Personal Name		*	PN	PN	X	X				X	X
Corporate or Conference Name	X	*	CN	CN	X	X				X	X
Personal Name as Subject		*	PS	PS	X	X				X	X
Corporate Name as Subject	X	*	CS	CS	X	X				X	X
Title	X	*	TI	TI	X	X				X	X
Title Continuation		*		TC	X	X					
Authorship Statement		*		AS	X	X					
Title as Subject		*	TI	ST	X	X					
Edition Statement		*		ED	X	X					X
Imprint		*		IM	X	X					X
Collation		*		CO	X	X					X
Series Title	X	*	SE	SE	X	X				X	X
Personal Name/Series Title	XX	*	PE	PE	X	X				X	X
Corporate Name/Series Title	X	*	CE	CE	X	X				X	X
ISBN		*	BN	BN	X	X					X
ISSN		*	IS	IS	X	X					X
General Notes		*		GN	X	X				X	
Autograph Note		*		AN	X	X				X	
Bibliography Note		*		BI	X	X				X	
Content Note		*		CT	X	X				X	
Dissertation Note		*		DT	X	X				X	
History Note		*		HN	X	X				X	
Limited Use Note		*		LN	X	X				X	
Bound With Note		*		BW	X	X				X	
Abstract		*		AB	X						
Call Number		*	CA	CA	X	X					X
Library Symbol		*	LI	CA	X	X					X
Holdings		*		HO	X						X
Shelving Location		*	SL	SL	X	X					X
Dashed-on-Entry		*	DO	DO	X	X					X
Publisher		*	YR	YR	X						X
Year of Publication (initial)		*	YR2	YR	X						X
Year of Publication (final)		*	LC	LC	X	X					X
rice		*									
C Card Number											

NAME OF ELEMENT	TEXT WORD SEARCHING	SEARCHABLE	SEARCH QUALIFIER	PRINT QUALIFIER	PRT DETAILED	PRT FULL	PRT	PRT DN (drop notes)	PRT SE (series)	PRT NA (name)	PRT AC (acquisitions)
Language		*	LA	LA	X						
Language of Summaries		*	LS	LS	X		X				X
First/Last Issue				FL	X						
Open/Closed Indicator		*	OC	OC	X						
Main Entry Type			MT	MT	X		X				X
Record Source		*	RS	RS	X						
Date of Entry		*	DA	DA	X		X				X
Date of Last Major Revision		*	MR	MR	X						
Date of Last Revision		*	LR	LR	X						
Revision Indicator		*	RI	RI	X						
Item Type		*	IT	IT	X		X				
Media		*	ME	ME	X						
MARC Indicators		*	MA	MA	X						
Citation Number		*	NO	NO	X		X				X
Index Medicus Indicator			IX	IX	X		X				
External Symbol		*	ES	ES	X						

Following are sample PRINT DETAILED unit records for a monograph and serial:

Monograph

MH - CLOMIPHENE/*TU/THERAPEUTIC USE
 MH - CORPUS LUTEUM/*PP/PHYSIOPATHOLOGY
 MH - GONADOTROPINS, CHORIONIC/*TU/THERAPEUTIC USE
 MH - MENOTROPINS/*TU/THERAPEUTIC USE
 CP - AUSTRIA
 PP - Z1.542.88
 PN - FRIEDRICH, FLORIAN
 TI - KLINIK DER GELBK:ORPERFUNKTION/G
 AS - / F. FRIEDRICH.
 IM - WIEN ::MAUDRICH,:1975.
 CO - 127 P. ::ILL.
 SE - HORMONE/G
 BN - 3-85175-269-4
 GN - SUMMARY IN ENGLISH.
 BI - BIBLIOGRAPHY: P. 59-77.
 CA - WP 530 F911K 1975:04NLM
 YR - S:1975
 LA - GER
 LS - ENG
 MT - PERSONAL NAME MAIN ENTRY
 RS - O:WW
 RS - C:SFS

DA - 760131
IT - MONOGRAPH
MA - MAIN ENTRY IN BODY
NO - 7601757

Serial

MH - FINANCING, GOVERNMENT/*/U. S. - PERIODICALS
MH - GOVERNMENT AGENCIES/*/U. S. - PERIODICALS
MH - LEGISLATION/*/U. S. - PERIODICALS
MH - UNITED STATES
CP - UNITED STATES
PP - Z1.107.567.875
CN - AMERICAN HOSPITAL ASSOCIATION/
TI - WASHINGTON DEVELOPMENTS./N
IM - WASHINGTON,:AMERICAL HOSPITAL ASSN., WASHINGTON OFFICE.
CO - V.:PORTS.
CA - W1 WA586M:04NLM
YR - M:1972
PR - 18.00 PER YEAR (SUBSCRIPTION)
LA - ENG
FL - V. 1- JAN. 1, 1972-
OC - 0
MT - TITLE MAIN ENTRY
RS - 0:VSW
RS - C:FMW
DA - 780817
IT - SERIAL
NO - 7806458

The following is a description of each of the data elements in the unit record:

8.5.1 MAIN HEADINGS (MH)

If the material has been subject cataloged, MeSH subject headings have been assigned. The qualifier for subject headings is (MH) for Main Headings. These are printable and directly searchable in the Index. NLM subject cataloging utilizes four types of subheadings in addition to the Main Headings:

- (1) Topical Subheadings (SH)
- (2) Geographic Subheadings (SH)
- (3) Form Subheadings (SH)
- (4) Language Subheadings (SH)

Complete lists of the Form, Geographic and Language Subheadings are included in PART 8, Appendices A (8.8), B (8.9), and C (8.10). Topical Subheadings are the same as those used in the indexing of journal articles for Index Medicus. They are entered exactly as you enter subheadings for MEDLINE. Therefore, if you wanted books which discussed the drug therapy of eye diseases, search:

EYE DISEASES/drug therapy

or

EYE DISEASES/DT

The cataloging section also uses six additional topical subheadings which are not used in MEDLINE. These headings parallel certain MEDLINE check tags and permit similar retrieval. These terms must be ANDed with other subject terms for retrieval purposes (rather than attached to Main Headings with a slash).

Check Tag

Pregnancy
Infant
Child
Child, Preschool
Adolescence
Adult
Middle Age
Aged

Cataloging Subheading

In pregnancy
In infancy & childhood
In infancy & childhood
In infancy & childhood
In adolescence
In adulthood
In middle age
In old age

(Note: These are the only indexing Check Tags which have equivalent cataloging subheadings.)

Examples:

1. If you want books on the subject of electrolytic balance in infants, search:

SS 1 /C? ELECTROLYTES OR WATER-ELECTROLYTE BALANCE

SS 2 /C? 1 AND IN INFANCY & CHILDHOOD

2. If you want books on adolescent skin diseases, search:

SS 1 /C? SKIN DISEASES AND IN ADOLESCENCE

3. If you want drug therapy of eye diseases in infants, search:

EYE DISEASES/DRUG THERAPY AND IN INFANCY & CHILDHOOD

Subject headings are used according to the instructions in the current Medical Subject Headings - Annotated Alphabetic List. Catalogers follow different rules for subject headings suffixed with "-ology" or other such specialty headings. If a heading is used on a work that requires a form subheading, such as dictionaries, atlases, etc., as used in Appendix A, the specialty term is used. For example, if you are looking for an atlas of eye diseases, search under OPHTHALMOLOGY AND ATLASES. However, if you want a textbook of eye diseases, search

under EYE DISEASES. For most comprehensive searching, search under both terms ORed together.

Form, geographic and language subheadings are carried in CATLINE as if they were main headings, and can be searched separately. Therefore, they should be ANDed with a subject term.

SS 2 /C?

USER:

NEOPLASMS AND BIBLIOGRAPHY (SH)

PROG:

SS (2) PSTG (25)

NEOPLASMS is a MeSH heading and BIBLIOGRAPHY is a form heading qualified to differentiate it from a Main Heading.

SS 3 /C?

USER:

SKIN DISEASES AND GT. BRIT. (SH)

PROG:

SS (3) PSTG (12)

SKIN DISEASES is a MeSH Main Heading and GT. BRIT. is a geographic heading always used in its abbreviated form.

8.5.1.1 SPECIAL PROBLEMS WITH MAIN HEADINGS

1. Since form, language and geographic subheadings must be entered into CATLINE as if they were Main Headings, it should be noted that the use of the Boolean AND can cause a number of 'false drops.' Even though they are classified as subheadings, they are stored in the computer as Main Headings, separate from the Main Headings they modify. A STRINGSEARCH of the Main Headings field may be necessary prior to the release of any bibliographies to users. For instance, if you desire a bibliography of works on the subject of History of Medicine in the United States, you would enter for searching:

HISTORY OF MEDICINE AND U. S.

This search retrieves the desired citations on the subject, but will also retrieve the following false drop:

MH - CATALOGS, UNION/*/U. S.
MH - HISTORY OF MEDICINE/*/CATALOGS
MH - LIBRARIES, MEDICAL/*/CATALOGS
PN - DONALDSON, ELLA///ED.
PN - MORELAND, SARA L.///ED.

CN - NATIONAL LIBRARY OF MEDICINE
PS - GARRISON, FIELDING HUDSON//1870-1935./GARRISON AND MORTON'S MEDICAL BIBLIOGRAPHY
TI - A:GUIDE TO THE LOCATION OF TITLES LISTED IN GARRISON AND MORTON'S MEDICAL BIBLIOGRAPHY (2ND ED. REV., 1965) IN TWENTY MIDWEST LIBRARIES/N

The HISTORY OF MEDICINE heading is paired with the form subheading CATALOGS in this citation, and the Main Heading CATALOGS, UNION is paired with the geographic subheading U. S. This citation is not directly on the subject of History of Medicine in the United States, although it is related.

Using the STRINGSEARCH capability, these false drops can be eliminated. For example, the above search could be limited to those citations dealing specifically with the History of Medicine in the United States as follows:

SS 1 /C?

USER:

HISTORY OF MEDICINE AND U. S.

PROG:

SS (1) PSTG (11)

SS 2 /C?

USER:

TS (MH) :HISTORY OF MEDICINE/U. S.:

2. Certain geographic subheadings are always used by the NLM Cataloging Section in their abbreviated form. These are:

GT. BRIT.
U. S.
U. S. S. R.

Please note that certain form headings were sometimes used in abbreviated form. Under MEDLARS II, however, these abbreviations have been eliminated and replaced with their full printed form. For example, POPULAR WORKS need not be entered as POP. WKS.

CATLINE now contains full EXPLODE capability for subject searching. Use the same instructions as for MEDLINE.

8.5.2 COUNTRY (PLACE) OF PUBLICATION (CP) AND TREE NUMBER (PP)

The country or place of publication of the cataloged item is searchable using the place names in Category Z of MeSH but the place names will not work in an EXPLODE. By using the Z Category MeSH Number, an explode-like capability may be used:

ALL Z1.107.757: (PP)

Note that the search query must be truncated and qualified. (Warning: Application of Z tree numbers was inconsistent before MEDLARS II. Since many records lack the PP field, prefer searching on the CP field, but remember

that all MEDLARS I records lack the CP.)

8.5.3 PERSONAL NAME (PN)

The Personal Name field contains all personal names used as the main entry or standard added entries. The first occurrence in this field is the Main Entry if the Main Entry type (MT) is PERSONAL NAME MAIN ENTRY. Personal names should be searched in the general format:

Surname, Forename:

or

Surname, First Initial:

Middle name and/or initials and birth years may be added. Personal names are entered with a comma after the surname. Forenames may have periods or commas after the name. Therefore, it is best to use the truncation symbol or colon (:) after the last definitely known character in the name. The name as entered for cataloging may have a birthdate, birth and death dates, or the designation of editor or compiler (ed., comp.). Without the use of the : sign, retrieval will only be achieved if the form of the name input in searching exactly matches the form of the name in CATLINE, including commas, periods, dashes, and modifiers.

Printed Form of Name

Garvin, Richard, 1909-1958
Morrison, George, ed.
Wells, H.

Search CATLINE Using

GARVIN, RICHARD:
MORRISON, GEORGE:
WELLS, H:

The # sign or variable character symbol may be used internally on a letter by letter basis. For example, if you are unsure whether the surname is spelled Smith or Smyth, you could enter SM#TH to retrieve both spellings.

8.5.4 CORPORATE NAME (CN)

The Corporate Name field contains corporate and conference names used as main entries and standard added entries. The first name in this field is the main entry if the Main Entry Type (MT) field is CORPORATE NAME MAIN ENTRY. Corporate names are established by the NLM Catalog Section in the general format:

Name. Subdivision. Subdivision

American Institute of Ultrasound in Medicine
U. S. Congress. Senate. Committee on Agriculture
and Forestry
North Dakota. Division of Health Planning

Conference names are established by the NLM Catalog Section in the general format:

Conference Name, number, place, year

European Anatomical Congress, 3d, Manchester, Eng., 1973

International Conference on the Biogenesis of Mitochondria,
Bari, 1973

Corporate names should be entered for name searching in their exact cataloging form. Be especially aware of spacing and punctuation. If a corporate name contains internal periods in its name which separate different portions of the name, insert one space between the internal period and the first word of the next portion. As with Main Headings, embedded AND's and OR's must be disguised using the variable character symbol (#).

8.5.4.1 TEXT WORD SEARCHING CAPABILITY (TW)

All corporate and conference names may be searched using the Text Word searching capability. If the first 36 characters of the corporate or conference name are not unique enough to specify your search, AND the name fragment with a distinguishing term in the name which occurs beyond the 36 characters. (Refer to PART 4 on Text Word searching.) If you are searching for:

U. S. Congress. Senate. Committee on Labor and Public Welfare.
Subcommittee on the Handicapped

Type in:

U. S. CONGRESS. SENATE. COMMITTEE ON: AND HANDICAPPED (TW)

or

(TW) CONGRESS AND SENATE AND LABOR AND HANDICAPPED

8.5.4.2 DIACRITICS

Names and words which include diacritics should be entered into CATLINE without diacritics and without modifying the letter; ü is not entered as ue, but as u.

In the print format, however, a colon precedes any letter which originally contained a diacritic, to indicate that it was modified.

<u>Name</u>	<u>Search CATLINE Using</u>	<u>CATLINE Print Out</u>
Pražák, M.	PRAZAK, M:	PRA:Z:AK, MILAN
Müller, Jurg	MULLER, JURG:	M:ULLER, J:URG

Note: If you request an "Offline Print" from CATLINE, any item which contains diacritics will have the actual diacritic printed preceding the letter it modifies, rather than the colon.

8.5.5 PERSONAL NAME AS SUBJECT (PS)

If a personal name has been used as a subject for a cataloged item, this name appears in the (PS) field. The search format is the same as for the Personal Name (PN) field.

8.5.6 CORPORATE NAME AS SUBJECT (CS)

If a corporate or conference name has been used as a subject for a cataloged item, this name appears in the (CS) field. The search formats are the same as those for the Corporate Name (CN) field including Text Word Searching (TW).

8.5.7 TITLE (TI)

The Title field contains the short title to all works cataloged and any variant titles traced differently. If the title is the main entry of the work, the Main Entry Type (MT) is TITLE MAIN ENTRY. The first occurrence of this field is the main entry.

The short title from the body of the entry is always carried as the first occurrence of this field. If this title is to be traced, (i.e., an access point made in a printed or card catalog) a capital letter G will be attached to the short title. If it is not to be traced, a letter N will appear following the short title. Variant titles are carried as second and succeeding occurrences of the (TI) field. Neither a G nor an N appears with these added titles since they are traced by definition.

8.5.7.1 TITLE SEARCH KEY

All titles carried in the Title (TI) field can be searched by means of a search key constructed from the title. The search key is the first three letters of the first significant word in the title followed by a slash, and the first letter of each of the next three words, each separated by a slash. Words beyond the fourth word in the title are not used to construct the search key. If the first significant word has fewer than three letters, use the entire word, and do not insert a blank(s). Hyphenated or slashed words are treated as one word for search key construction. Single characters bounded by spaces on both sides are considered as one word. Initial articles in any language are disregarded (except for elided articles) but internal articles are regarded. Elided articles and contractions are included in the search key, but the apostrophe is dropped and the string is considered as one word.

INITIAL ARTICLE TABLE

To be ignored in title search key.

a	dei	eene	en	het	las	oa	un
al	den	egy	et	ho	le	os	una
an	der	ei	ett	hoi	les	ta	une
as	det	ein	gei	i	lo	the	uno
az	die	eine	ha	ie	los	to	
das	e	eit	hai	l	lu	um	
de	een	ee	he	la	o	uma	

Only the words in the short title or variant title should be used to construct the search key. However, it is NLM cataloging practice to avoid one and two word titles as being not unique for title search keys, and as a result, information which may be a candidate for title continuation according to ISBD-M Chapter 6 may be retained as title proper in the CATLINE record. When in doubt as to how an NLM cataloger has treated a title, it is wise to use a title search key truncated after what appears to be the short title ANDed with a Text Word from the short title.

Example: Der Kleine Pauly : Lexikon der Antike
apparent short title apparent title continuation

Search CATLINE Using: ALL KLE/P: AND PAULY (TW)

This combination of a title key and Text Word searching can be used for titles having a more common title key in order to reduce the postings retrieved.

Example: Proceedings of the International Symposium on Immunology and Immunopathology of Malaria

USER:
PRO/0/T/I
PROG:
SS (1) PSTG (193)

SS 2 /C?
USER:
PRO/O/T/I AND IMMUNOLOGY (TW)
PROG:
SS (2) PSTG (2)

Only the following characters are used in constructing a key; all other characters are deleted by the program:

26 alphabetic characters

0-9 numerals

ampersand (&)

It is wise to search by alternative methods in addition to the search key because the program may have inadvertently created a key contrary to the above rules.

Examples of title search keys:

<u>Printed Title</u>	<u>CATLINE Search Key</u>	<u>Note</u>
The case of the midwife toad	CAS/0/T/M	Disregard initial article
Help for the depressed	HEL/F/T/D	Use internal article
Atlas of colposcopy	ATL/0/C	Fewer than 4 words
Removal partial	REM/P	Fewer than 4 words
Surgery	SUR	"
L'Acougramme phonetique	LAC/P	Apostrophe dropped - considered one word
I'm done crying	IM/D/C	Apostrophe dropped - considered one word; no blank inserted
Al-Anon faces alcoholism	ALA/F/A	Hyphenated word treated as one word
Proceedings of the 2d International Congress on Electrocardiology	PRO/0/T/2	Use of number
F. A. S. newsletter	F/A/S/N	Characters bounded by spaces considered one word
NFAIS newsletter	NFA/N	Characters not bounded by spaces
Suicide & life-threatening behavior	SUI/&L/B	Use ampersand; hyphenated word treated as one word

Titles in which the significant word begins with the letters 'ALL', 'EXP', 'NOT', 'YES', and 'AND' must have a # sign substituted for the first slash in the search key. If the # sign is not used, the program interprets these characters as the word ALL used in the Multi-Meaning Message, the abbreviation of the instruction EXPLODE, YES as an answer to various program questions, and the logical operators AND or NOT.

Printed Title

Allergy in children

CATLINE Search Key

ALL#I/C

Exploring the brain

EXP#T/B

Yesterday was Tuesday,
all day and all night

YES#W/T/A

Please be advised that certain title search key may not be used interchangeably between CATLINE and SERLINE. SERLINE keys differ from CATLINE keys in the following ways:

1. elided articles: SERLINE drops the apostrophe and considers the string as two words
2. fewer than three letters in first word: SERLINE inserts one blank before the first slash
3. hyphenated words: SERLINE treats as one word if the parts cannot stand alone; but as two words if parts can stand alone (often both versions are supplied)
4. ampersand: SERLINE always translates to mean and in the language of the title

8.5.7.2 TEXT WORD SEARCHING CAPABILITY (TW)

The title fields can be searched using the Text Word searching capability. It can be used alone or in conjunction with a title search key or coordination of author, etc.

If you search for:

Sociobiology / by Edward O. Wilson

Type in:

SOCIOBIOLOGY (TW) AND WILSON, EDWARD:

If you search for:

Proceedings of the international symposium on inhalation therapy

Type in:

PRO/O/T/I AND INHALATION (TW) AND THERAPY (TW)

8.5.8. TITLE CONTINUATION (TC)

The Title Continuation element contains subtitles, parallel titles and/or translated titles for items cataloged. This field is printable and not directly searchable.

8.5.9 AUTHORSHIP STATEMENT (AS)

If the work contains an authorship statement or an editor or compiler statement, the data is displayed in this field. MEDLARS I records may have the authorship statement in the TC field. The field is printable but not directly searchable.

8.5.10 EDITION STATEMENT (ED)

If the work which was cataloged had an indication of its edition, this information is shown in the edition statement which is printable but can only be searched using the STRINGSEARCH capability.

8.5.11 FIRST/LAST ISSUE (FL)

All serials have the date of the first issue in this field. Those which have ceased publication or have been continued or superseded by another, have the dates of the first issue and the last issue in the (FL) field. This field is printable but searchable only through the STRINGSEARCH capability.

8.5.12 IMPRINT (IM)

The imprint statement includes the place of publication, the publisher, and the year of publication and/or copyright date. Each element in the imprint statement is separated by a colon (:) because of the computer requirements for the printing of the NLM Current Catalog. If the date has been bracketed, brackets will be printed if your terminal has brackets. The imprint field is printable but not directly searchable.

8.5.13 COLLATION (CO)

The collation statement indicates the number of pages in an item and whether it contains any illustrative material of note. It is printable, but searchable only using the STRINGSEARCH capability.

8.5.14 SERIES TITLE (SE)

The Series Title field contains all series notes and series added entries which are titles. (Author-title series added entries are contained in the (PE) or (CE) fields discussed below). The series note is always the first occurrence of this field. If it is traced in the same form, a capital G will follow the note. Any series titles traced differently will be printed in the second and subsequent occurrences of this field or the series fields below. This field is directly searchable using the first 36 characters of the print string in conjunction with the Truncation Symbol (:). Both the ISBD and Non-ISBD formats should be searched. Note that punctuation in ISBD requires a space before and after semicolons and colons that appear in series.

Printed Series Title

Current topics in experimental endocrinology

Pastoral psychology series, no. 5

Pastoral psychology series ; no.

Search CATLINE Using

CURRENT TOPICS IN EXPERIMENTAL:

PASTORAL PSYCHOLOGY SERIES,
NO: (NON-ISBD format)

PASTORAL PSYCHOLOGY SERIES ;
NO: (ISBD format)

8.5.15 PERSONAL NAME/SERIES TITLE (PE)

8.5.16 CORPORATE NAME/SERIES TITLE (CE)

If the cataloged item requires an author-title series added entry, it is carried in the Personal Name Series Title (PE) field if the author name is a personal name. If the author name is a corporate or conference name, the series added entry is carried in the Corporate Name Series Title (CE) field. Both these fields are searchable using the first 36 characters of the printed form of the series. If the series form is more than 36 characters, use the Truncation Symbol (:) as the last character.

Printed Series Title

Acta Medica Scandinavica.
Supplementum 416

Acta Medica Scandinavica.
Supplementum ; 416

Bourne, Geoffrey Howard, 1909-
The Chimpanzee, v.5

Search CATLINE Using

ACTA MEDICA SCANDINAVICA.
SUPPLEMEN:

ACTA MEDICA SCANDINAVICA.
SUPPLEMEN:

BOURNE, GEOFFREY HOWARD, 1909:

8.5.16.1 TEXT WORD SEARCHING CAPABILITY (TW)

All series notes and added entries (SE, PE, CE) are searchable using the Text Word search capability. Use the same search strategy as suggested under Corporate Name Text Word searching. (Refer also to section on Text Word searching in Part 4.)

8.5.17 ISBN (BN)

The International Standard Book Number (BN) is directly searchable and printable. Always input the ISBN as a thirteen (13) character string including numerals and hyphens qualified with (BN).

NLM Current Catalog Print Format

ISBN 0-226-13481-4

ISBN 0-911216-09-X

Search CATLINE Using

0-266-13481-4 (BN)

0-911216-09-X (BN)

8.5.18 ISSN (IS)

The International Standard Serial Number is directly searchable and printable. Always input the ISSN as a nine (9) character string including numerals and a single hyphen and qualify with (IS).

NLM Current Catalog Print Format

ISSN: 0001-2092

ISSN: 0001-4168

Search CATLINE Using

0001-2092 (IS)

0001-4168 (IS)

8.5.19 NOTES

All notes (8.5.20 - 8.5.27) in CATLINE have been differentiated as to type of note for MARC conversion purposes. All notes, regardless of type, are printable only and may only be searched by using the STRINGSEARCH capability.

8.5.20 GENERAL NOTES (GN)

The general notes field contains all notes which do not qualify as one of the specific types listed below.

8.5.21 AUTOGRAPH NOTE (AN)

If the item cataloged by NLM contains an author's autograph, it is noted in this field.

8.5.22 BIBLIOGRAPHY NOTE (BI)

If the item cataloged contains a bibliography of 10 or more consecutive pages it is noted in this field.

8.5.23 CONTENT NOTE (CT)

If the contents of a work are enumerated, the data would be added to this field.

8.5.24 DISSERTATION NOTE (DT)

If the item cataloged was presented as a thesis or dissertation, a note to that effect would be carried in this field.

8.5.25 HISTORY NOTE (HN)

This field contains any notes which explain the bibliographic history of the item cataloged.

8.5.26 LIMITED USE NOTE (LN)

If the item cataloged has any limitations on its distribution or availability, a note is made in this field.

8.5.27 BOUNDED WITH NOTE (BW)

If the item cataloged has been bound together with other bibliographic items, a note to that effect is made in this field.

8.5.28 ABSTRACT (AB)

The Abstract field is not directly searchable. Currently, the only items which might have abstracts are those items selected for inclusion in Medical Reference Works and its supplements.

8.5.29 CALL NUMBER (CA)

All call numbers are now uniquely searchable through all characters in the number. Therefore, if you know NLM's call number to be W4 C78 1974 input the entire string:

WA C78 1974

If you are not sure of the year or want other editions, use the truncation symbol after the book or Cutter portion of the call number.

W4 C78:
WD 205 N539i:

All Cataloging in Publication (CIP) material is entered into CATLINE at least twice: first, when the material arrives as part of the Cataloging in Publication program, and second, when the material arrives in published form.

Cataloging for CIP is done against the title page, table of contents, index, and other introductory material. When the item is actually published, the NLM Cataloging Section reviews the original CIP cataloging against the published item and makes all necessary additions and changes.

Call numbers for CIP materials are modified by the symbol (P) after the call number. The (P) is removed from the call number when the item is published. If the phrase "Not Acquired" appears in the CA field for a CIP, it means the CIP was found to be out of scope and/or coverage.

Please Note: If you are using CATLINE for NLM interlibrary loan purposes, please do not submit OXNLM call numbers with brackets surrounding them on your ILL slips. These items do not exist at NLM under these call numbers. OXNLM call numbers are provided by NLM for use by other network libraries. Please request only items having call numbers which have an O4NLM library symbol attached.

8.5.30 LIBRARY SYMBOLS (LI)

The CATLINE data base currently carries five library symbols to indicate library holdings.

01HMS - for the Francis A. Countway Library of Medicine, Harvard University.

02SSY - for the Upstate Medical Center of the State University of New York, Syracuse.

04NLM - for the National Library of Medicine.

11CLA - for the Biomedical Library at the University of California at Los Angeles.

WDNLM - for items withdrawn from NLM. Do not request on INTERLIBRARY LOAN.

Each code is comprised of two numbers which identify the region in the Regional Medical Library Network, and three letters which identify the specific library. All codes are now directly searchable.

A Library symbol can be searched alone to find the number of citations in CATLINE which that library owns, for example:

01HMS
PROG:
SS (1) PSTG (5854)

The Library symbol can also be used to locate a specific title, such as Forward Plan for Health, in a particular library, such as Harvard, for example:

FOR/P/F/H AND 01HMS
PROG:
SS (1) PSTG (1)

8.5.31 HOLDINGS (HO)

The Holdings field will be used to indicate NLM's holdings for a particular title. Holdings for currently cataloged items will be indicated. Retrospective holdings will not be indicated. This field is printable but not searchable.

8.5.32 SHELVING LOCATION (SL)

The Shelving Location data element can be printed and searched directly. The only locations currently available for searching are an indication that the work was selected for the NLM Reference Room Collection, Archives and History of Medicine. This material may be searched by using the designations REF., ARCH., or MED. HIST.

The REF location does not mean that the citations are all currently held in the NLM Reference Room collection. The items were, however, selected for that collection at the time of cataloging. Weeding of specific items may have occurred since that time, or additional copies may have been acquired for the General Collection.

8.5.33 DASHED-ON-ENTRY (DO)

The Dashed-on-entry field includes information on any supplements, and includes any separate call number for the Dashed-on-entry. These call numbers are searchable in the same manner as Call Numbers (CA) above.

8.5.34 PUBLISHER (PU)

The Publisher field was created for internal processing at NLM. It is a printable field but not searchable.

8.5.35 YEAR OF PUBLICATION (YR) and (YR2)

The format of the year of publication field is: M:1973:1977. Note that four-digit dates (not two-digit) are always used. The type of date is represented by a single alphabetic character:

M = Multiple Date - used for serials, works-in-part, and monographic series
S = Single Date
C = Copyright Date
Q = Questioned Date
R = Reproduction

The date after the first colon is the initial year (YR) and the date after the second colon is the final year (YR2) for dates preceded by the letter M. Note that YR2 is a search qualifier only; YR is a search qualifier and the print qualifier. This field is rangeable, but because of the structure of this field YR dates must be ranged separately from YR2 dates. For example:

PHARMACOLOGY AND FROM 1970 TO 1974 (YR)
PHARMACOLOGY AND FROM 1970 TO 1974 (YR2)

The above examples when ANDed together will retrieve works-in-part or serials or monographic series begun and ceased during the five year period 1970-74 dealing with pharmacology. (Warning: Ranging on YR2 may also retrieve dates preceded by the letters Q and C, in addition to the letter M.)

The following chart shows how NLM catalogers convert a date for input if the date on the piece is fewer or more than four digits:

<u>Imprint Date</u>	<u>Values Entered in YR Field</u>
19--	(YR) (YR2) Q:1900:1978 (or year of cataloging)
190-	Q:1901:1978 "
191-	Q:1910:1978 "
1910?	S:1910
1956-57	M:1956:1957
1977, c1975	C:1977:1975
c1975	S:1975
1976	S:1976

The publication or copyright year is carried also in the Imprint (IM) field.

8.5.36 PRICE (PR)

The price of items cataloged is entered in U.S. dollars. The Price field is printable but not directly searchable.

8.5.37 LC CARD NUMBER (LC)

The Library of Congress catalog card number is directly searchable and printable. Always input the LC number as given, including the hyphen, and qualify with (LC).

NLM CURRENT CATALOG Print Format

LC: 72-305036

LC: 77-57

Search CATLINE Using

72-305036 (LC)

77-57 (LC)

8.5.38 LANGUAGE (LA)

Language in which the item is written may be directly searched using the three (3) letter abbreviations attached in Appendix D. The field qualifier (LA) must be used.

FRE (LA)
ENG (LA)

8.5.39 LANGUAGE OF SUMMARIES (LS)

Language of Summaries field indicates whether the item cataloged contains summaries in the original and other languages. If summaries are provided in four or more languages, MUL for Multiple Languages is used. However, if English is one of the summary languages, it is always indicated as ENG.

8.5.40 OPEN/CLOSED INDICATOR (OC)

For serials, the open/closed indicator signifies whether the serial is still open and continuing, or has ceased and is closed. It is searchable as O for open or C for closed.

8.5.41 MAIN ENTRY TYPE (MT)

The Main Entry Type indicates which element is the main entry for the cataloged item. The first occurrence of the field name will always be the main entry.

If MT is PERSONAL NAME MAIN ENTRY, the first occurrence of the PN field is the main entry.

If MT is CORPORATE NAME MAIN ENTRY, the first occurrence of the CN field is the main entry.

If MT is TITLE MAIN ENTRY, the first occurrence of the TI field is the main entry.

8.5.42 RECORD SOURCE (RS)

The Record Source is a field for internal control of the cataloging record as it is processed. It indicates the origin of the record. While it is printable and searchable, the data has no significance except for internal NLM processing. All converted records from MEDLARS I will be displayed as 0:MED C:MED.

8.5.43 DATE OF ENTRY (DA)

The Date of Entry is directly searchable in the Index, rangeable, and printable. It represents the day that the citation was released for transmission to CATLINE and should not be confused with the publication date of the item itself. Date of entry is carried as a six-digit number in the format: YYMMDD, where Y equals year, M equals month, and D equals day. May 6, 1977 would be input as 770506 (DA). Date of entry must be qualified to distinguish it from these other fields:

Date of Last Major Revision (MR)
Date of Last Revision (LR)

The date of entry may be searched alone to obtain the number of citations input to the file on any specific month or day, or to determine the latest date the file was updated. It may also be combined with any searchable element to restrict the search to a particular time period or to update an earlier search.

The truncation symbol (:) is used to obtain citations entered into the file during an entire month or year. A Multi-Meaning Message will be obtained because citations are entered on more than one day in any month. If the truncated date is preceded by the word ALL, the Multi-Meaning message will be avoided. For example:

7705: (DA)

PROG:

MM (7705:) (4)

- 1 770506 (DA)
- 2 770513 (DA)
- 3 770520 (DA)
- 4 770527 (DA)

Entry date searched alone to
find total citations input for
a particular month.

SPECIFY NUMBERS, ALL, OR, NONE-

USER:

ALL

PROG:

SS (1) PSTG (847)

* * * * *

ALL 7705: (DA)

PROG:

SS (1) PSTG (847)

If ALL is used, program gives postings immediately without the Multi-Meaning Message.

* * * * *

S (IT) AND ALL 7705: (DA)

PROG:

SS (1) PSTG (131)

Entry date combined with another searchable element.

* * * * *

SS 1 /C?

USER:

POPULAR WORKS AND ALL 7705: (DA)

PROG:

SS (1) PSTG (15)

When updating a search for more than one month or day, each date is combined with the search strategy.

SS 2 /C?

USER:

POPULAR WORKS AND ALL 7706: (DA)

PROG:

SS (2) PSTG (22)

SS 3 /C?

USER:

1 OR 2

PROG:

SS (3) PSTG (37)

8.5.44 DATE OF LAST MAJOR REVISION (MR) (Rangeable)

In the format YYMMDD (YearMonthDay), this date field indicates a major revision made by NLM catalogers to primary elements of the record. Qualify when searching this field to avoid confusion with the DA and LR fields.

8.5.45 DATE OF LAST REVISION (LR) (Rangeable)

In the format YYMMDD (YearMonthDay), this date field is automatically generated whenever a citation is file maintained or changed in any way. Qualify when searching this field to avoid confusion with the DA and MR fields.

8.5.46 REVISION INDICATOR (RI)

If changes to a citation are significant enough to warrant republication of the cataloging in the next regular cumulation of the Current Catalog, the RI field will contain one of the following symbols:

rev - for records that have had major revisions to data element(s)

recat - for records that have been completely recataloged according to current practice

rev. CIP - for revised CIP records

Other symbols occurring in the RI field are:

CIP:COV	Cataloguing-in-Publication (CIP) not acquired because of coverage
CIP:OS	CIP not acquired because out-of-scope
w/d:76 Inv.	Withdrawn - not found in 1976 inventory
w/d:COV	Withdrawn - coverage
w/d:DUP	Withdrawn - duplicate
w/d:NS	Withdrawn - nonsubstantive
w/d:OS	Withdrawn - out-of-scope
w/d:SUP	Withdrawn - superseded

Citations having any one of the codes in the last group above will not be republished in any NLM cumulation of the Current Catalog. The citations are being retained in CATLINE in order to provide current information on the non-availability of interlibrary loans for these items from NLM. The RI field is directly searchable.

8.5.47 ITEM TYPE (IT)

Item Type (IT) is indicated by a one-letter code listed in the table below. Except for M, these codes are directly searchable and should be qualified by (IT) for searching. To locate monographs, search all other item types ORed together. Use the AND NOT strategy to negate these other item types leaving Monographs only. The entire word(s), however, now appears when PRINT commands are used.

IT Item Type

M for Monograph
S for Serial
T for Technical Report
Z for Monographic Series

B for Book in Parts
H for Thesis
P for Pamphlet
C for Collective

SS 1 /C?

USER:
S (IT) OR Z (IT)
PROG:
SS (1) PSTG (28076)

Search to obtain all series or monographic series in the data base.

SS 2 /C?

USER:
1 AND FRE (LA)
PROG:
SS (2) PSTG (2521)

Search to obtain only those items in the French language.

8.5.48 MEDIA (ME)

The medium type is searchable using the terms listed. The medium type is synonymous with the medium designator used in the Body of the Entry.

FILMSTRIP
KIT
MICROFICHE
MICROFILM
MODEL

MOTION PICTURE
SLIDE
SOUND RECORDING
TRANSPARENCY
VIDEORECORDING

Currently, the only audiovisual materials input into CATLINE are serially issued audiovisuals.

8.5.49 MARC INDICATORS (MA)

These indicators have been added for MARC conversion and are searchable using the table values below:

MA MARC Indicators

A for Government Publication
B for Festschrift
C for Index
D for Main Entry in Body

E for Fiction
F for Translated Work
G for Publisher in Entry
8 for CIP cataloging

8.5.50 CITATION NUMBER (NO)

Citation numbers are sequential numbers assigned to citations as they are processed for inclusion in the NLM Current Catalog. Citation numbers are directly searchable in their seven-digit format.

8.5.51 TITLE AS SUBJECT (TI)

When a piece is about another work, an added entry is made for the title of that work. The title as subject can be searched by title search key, or Text Word. The print qualifier for this field is ST.

8.5.52 INDEX MEDICUS INDICATOR (IX)

Beginning with the May 1976 Index Medicus issue, some congresses have been indexed for inclusion in Index Medicus. The value IM will appear in the IX field for these items.

8.5.53 EXTERNAL SYMBOL (ES)

Indicates the library symbol of a library which owns the piece.

8.6 TEXT WORD SEARCHING CAPABILITY (TW)

The following CATLINE fields are available for Text Word searching:

CN	Corporate Name
CS	Corporate Name as Subject
SE	Series Titles
PE	Personal Name Series Titles
CE	Corporate Name Series Titles
TI	Title

Text Word searching may be used in conjunction with index searching of elements as a special individual feature. Always use the (TW) qualifier when Text Word searching, or use the ELEMENTS APPLY command.

8.7 CATLINE PRINT COMMANDS

There are seven standard PRINT commands in CATLINE. They are listed below with their abbreviations and the data elements which will be displayed with each.

1) PRINT or PRT

MT - Main Entry Type
PN - Personal Name
CN - Corporate or Conference Name
TI - Title
TC - Title Continuation
ED - Edition
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name Series Title
CE - Corporate Name Series Title

CA - Call Number and Library Symbol
NO - Citation Number
IT - Item Type
AS - Authorship Statement
DO - Dashed-on-Entry
IX - Index Medicus Indicator
PS - Personal Name as Subject
FL - First/Last Issue
SL - Shelving Location
CS - Corporate Name as Subject

2) PRINT FULL or PRT FU

MT - Main Entry Type
MH - Main Heading Descriptor
PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
TI - Title
TC - Title Continuation
AS - Authorship Statement
ST - Title as Subject
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name Series Title
CE - Corporate Name Series Title
BN - ISBN
IS - ISSN
GN - General Notes
AN - Autograph Note

BI - Bibliography Note
CT - Content Note
DT - Dissertation Note
HN - History Note
LN - "Limited Use" Note
BW - Bound With Note
CA - Call Number and Library Symbol
SL - Shelving Location
DO - Dashed-on-Entry
PR - Price
LC - LC Card Number
FL - First/Last Issue
DA - Date of Entry
NO - Citation Number
IT - Item Type
IX - Index Medicus Indicator
ED - Edition
CS - Corporate Name as Subject

3) PRINT DETAILED or PRT DL

MT - Main Entry Type
MH - Main Heading Descriptor
CP - Country of Publication
PP - Country (Place) of Publication
 Tree Number
PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject
TI - Title
TC - Title Continuation
AS - Authorship Statement
ST - Title as Subject
ED - Edition
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name Series Title
CE - Corporate Name Series Title
BN - ISBN
IS - ISSN
GN - General Notes
AN - Autograph Note
BI - Bibliography Note
CT - Content Note
DT - Dissertation Note
HN - History Note

LN - "Limited Use" Note
BW - Bound With Note
AB - Abstract
CA - Call Number and Library Symbol
HO - Holdings
SL - Shelving Location
DO - Dashed-on-Entry
PU - Publisher
YR - Year of Publication
PR - Price
LC - LC Card Number
LA - Language
LS - Language of Summaries
FL - First/Last Issue
OC - Open/Closed Indicator
RS - Record Source
DA - Date of Entry
MR - Date of Last Major Revision
LR - Date of Last Revision
RI - Revision Indicator
IT - Item Type
ME - Media
MA - MARC Indicators
NO - Citation Number
ES - External Symbol
IX - Index Medicus Indicator

4) PRINT NAME or PRT NA

PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject

5) PRINT SERIES or PRT SR

SE - Series Title
PE - Personal Name/Series Title
CE - Corporate Name/Series Title

6) PRINT DROP NOTES or PRT DN

GN - General Notes
AN - Autograph Note
BI - Bibliography Note
CT - Content Note

DT - Dissertation Note
HN - History Note
LN - Limited Use Note
BW - Bound with Note

7) PRINT ACQUISITIONS or PRT AC

PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject
TI - Title
TC - Title Continuation
ED - Edition Statement
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name/Series Title
CE - Corporate Name/Series Title
BN - ISBN
IS - ISSN

CA - Call Number and Library Symbol
HO - Holdings
SL - Shelving Location
DO - Dashed-on-Entry
PU - Publisher
YR - Year of Publication
PR - Price
FL - First/Last Issue
MT - Main Entry Type
DA - Entry Date
NO - Citation Number
IX - Index Medicus Indicator
AS - Authorship statement

ALL CATLINE PRINT commands will display 25 lines plus the number of lines needed to complete the record being printed at the 25th line, unless you explicitly ask for fewer records. The first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified may be displayed by answering YES to each CONTINUE PRINTING? (YES/NO) message.

Tailored PRINT commands, including the OFFLINE print option, may be constructed to meet a non-standard printing requirement. (Refer to Part 4 of this Manual).

The CATLINE data base can also be searched in the OFFSEARCH and STORESEARCH mode. See Part 5 for further explanations.

For those elements which are rangeable, see instructions in Part 4 of this manual.

CATLINE
APPENDIX A

8.8 APPLICATION OF MEDICAL SUBJECT HEADINGS IN BOOK CATALOGING

The National Library of Medicine uses Medical Subject Headings as the authoritative source for cataloging books and periodicals added to the collection. For cataloging, however, the MeSH list is modified by the use of form, geographic, and language subheadings and by six additional topical subheadings.

FORM SUBHEADINGS

ABBREVIATIONS	EXHIBITIONS
ABSTRACTS	EXHIBITIONS - CATALOGS
ABSTRACTS - BIBLIOGRAPHY	EXPERIMENTS
ACRONYMS	FILM CATALOGS
AERIAL PHOTOGRAPHS	FILMSTRIPS
AMATEURS' MANUALS	FILMSTRIPS - CATALOGS
ANECDOTES	FORMS
ATLASSES	GUIDEBOOKS
AUDIOTAPE CATALOGS	HANDBOOKS
AUDIOTAPES	HUMOR
AUDIOTAPES - PERIODICALS	INDEXES
AUDIOVISUAL AIDS - CATALOGS	INDEXES - BIBLIOGRAPHY
AUDIOVISUAL KITS	JUVENILE FILMS
BIBLIOGRAPHY	JUVENILE LITERATURE
BIBLIOGRAPHY - CATALOGS	JUVENILE PHONORECORDS
BIBLIOGRAPHY - UNION LISTS	LABORATORY MANUALS
BIOBIBLIOGRAPHY	LEGISLATION
BIOGRAPHY	LEGISLATION - CONGRESSES
BIOGRAPHY - JUVENILE LITERATURE	LEGISLATION - PERIODICALS
BOOK REVIEWS	MANUSCRIPTS - CATALOGS
CARTOONS	MAPS
CASE STUDIES	MICROSCOPIC SLIDES
CASES	MOTION PICTURE LOOPS
CATALOGS	MOTION PICTURES
CHARTS	MOTION PICTURES - CATALOGS
COLLECTED WORKS	NOMENCLATURE
COLLECTIONS - CATALOGS	NOTATION
CONGRESSES	NURSING TEXTS
CONGRESSES - BIBLIOGRAPHY	OUTLINES
CONGRESSES - DIRECTORIES	PATENTS
CORRESPONDENCE	PERIODICALS
DATA TAPES	PERIODICALS - BIBLIOGRAPHY
DICTIONARIES	PERIODICALS - DIRECTORIES
DIRECTORIES	PERIODICALS - UNION LISTS
DIRECTORIES - BIBLIOGRAPHY	PERSONAL NARRATIVES
DRAWINGS	PHONODISCS
ENCYCLOPEDIAS	PHONODISCS - CATALOGS
ENCYCLOPEDIAS - POPULAR WORKS	PHONORECORD CATALOGS
ESSAYS	PHRASE BOOKS
EXAMINATION QUESTIONS	PICTORIAL WORKS

POPULAR WORKS
POPULAR WORKS - PERIODICALS
PORTRAITS
PORTRAITS - CATALOGS
PROBLEMS
PROGRAMMED TEXTS
REGISTERS
SLIDES
SOCIETIES
SOCIETIES - DIRECTORIES
SOCIETIES - PERIODICALS

SOCIETIES - YEARBOOKS
SPECTRA
STATISTICS
STATISTICS - CONGRESSES
SYMBOLS
TABLES
TERMINOLOGY
TRANSPARENCIES
VIDEOTAPES
YEARBOOKS

following main headings are divided by geographic or language subheadings.
may be further subdivided by form subheadings when necessary.

ABORTION, INDUCED
ABORTION, LEGAL
ACADEMIES AND INSTITUTES
ACCIDENTS (all headings)
AIR POLLUTION
AIR POLLUTION, RADIOACTIVE
ANTHROPOLOGY (all headings)
AWARDS AND PRIZES
BALNEOLOGY
BIBLIOGRAPHY, NATIONAL
BIBLIOGRAPHY OF MEDICINE
BIOBIBLIOGRAPHY
BIOGRAPHY
BOOK INDUSTRY
BOOKSELLING
CAREER MOBILITY
CATALOGS, BOOKSELLERS'
CATALOGS, DRUG
CATALOGS, LIBRARY
CATALOGS, PUBLISHERS'
CATALOGS, UNION
CHARITIES
CHILD HEALTH SERVICES
CHILD WELFARE
CITY PLANNING
CIVIL DEFENSE
COMMUNICABLE DISEASE CONTROL
COMMUNITY HEALTH SERVICES
COMMUNITY PHARMACY SERVICES
COMMUNITY MENTAL HEALTH SERVICES
COMPREHENSIVE DENTAL CARE
COMPREHENSIVE HEALTH CARE
COMPREHENSIVE HEALTH PLANNING
CONSUMER ORGANIZATIONS
CRIME
DELIVERY OF HEALTH CARE
DEMOGRAPHY
DENTAL CARE
DENTAL HEALTH SURVEYS
DENTISTS

DENTISTS, WOMEN
DICTIONARIES (by language)
DICTIONARIES, CHEMICAL (by language)
DICTIONARIES, DENTAL (by language)
DICTIONARIES, MEDICAL (by language)
DICTIONARIES, PHARMACEUTICAL (by language)
DIRECTORIES
DISEASE OUTBREAKS
DRUG AND NARCOTIC CONTROL
DRUG INDUSTRY
ECONOMICS (all headings)
EDUCATION (all headings)
EMERGENCY HEALTH SERVICES
EMERGENCY SERVICES, PSYCHIATRIC (minor)
EMIGRATION AND IMMIGRATION
ENVIRONMENT
ENVIRONMENTAL HEALTH
ENVIRONMENTAL POLLUTION
EPIDEMIOLOGY
ETHNIC GROUPS
EXPENDITURES, HEALTH
FAMILY PLANNING
FETAL DEATH
FINANCING (all headings)
FISHERIES
FOOD HABITS
FOOD INSPECTION
FOOD SUPPLY
FOOD TECHNOLOGY
FOREIGN MEDICAL GRADUATES
GOVERNMENT (all headings)
HEALTH AND WELFARE PLANNING
HEALTH EDUCATION
HEALTH FACILITIES
HEALTH FACILITY PLANNING
HEALTH MAINTENANCE
ORGANIZATIONS
HEALTH MANPOWER

HEALTH OCCUPATIONS
HEALTH RESORTS
HEALTH SERVICES
HEALTH SURVEYS
HISTORY OF DENTISTRY
HISTORY OF MEDICINE (all headings)
HISTORY OF NURSING
HOMES FOR THE AGED
HOSPITAL ADMINISTRATION
HOSPITAL DESIGN AND CONSTRUCTION
HOSPITAL OUTPATIENT CLINICS
HOSPITAL PLANNING
HOSPITALS (all headings)
HOUSING
INDUSTRIAL MEDICINE
INCOME
INFANT MORTALITY
INFORMATION CENTERS
INFORMATION SERVICES
INSURANCE (all headings)
INSURANCE, HEALTH
INVERTEBRATES
JURISPRUDENCE
JUVENILE DELINQUENCY
LABORATORIES
LEGISLATION (all headings)
LIBRARIES (all headings)
LIBRARY ASSOCIATIONS
LIBRARY SERVICES
LIBRARY SURVEYS
LIBRARY TECHNICAL SERVICES
LICENSURE (all headings)
MATERNAL HEALTH SERVICES
MATERNAL MORTALITY
MATERNAL WELFARE
MEDICAL ASSISTANCE
MEDICAL ASSISTANCE, TITLE 19
(by state)
MEDICAL MISSIONS
MENTAL HEALTH SERVICES
MINERAL WATERS
MORBIDITY
MORTALITY
NAMES
NEOPLASMS-OCCURRENCE
NURSES
NURSING HOMES
NUTRITION SURVEYS
OCCUPATIONAL HEALTH SERVICES
ORGANIZATIONS
PARASITES
PERIODICALS
PERSONAL HEALTH SERVICES
PHARMACISTS
PHARMACOPOEIAS

PHILOLOGY (by language)
PHYSICAL EDUCATION AND TRAINING
PHYSICIANS
PHYSICIANS, WOMEN
PLANTS, MEDICINAL
POLITICS
POPULATION (all headings)
POVERTY
PREVENTIVE HEALTH SERVICES
PRINTING
PRISONS
PROSTITUTION
PUBLIC ASSISTANCE
PUBLIC HEALTH
PUBLIC HEALTH ADMINISTRATION
PUBLIC HEALTH DENTISTRY
PUBLIC HEALTH NURSING
PUBLIC HOUSING
PUBLISHING
QUALITY OF HEALTH CARE
REHABILITATION CENTERS
RESEARCH
RESEARCH PERSONNEL
RESEARCH SUPPORT (if other
than U.S.)
RESIDENTIAL FACILITIES
RESIDENTIAL MOBILITY
RURAL HEALTH
RURAL POPULATION
SANITATION
SCHOOL HEALTH
SCHOOLS (all headings)
SHIPS
SOCIAL CONDITIONS
SOCIAL ENVIRONMENT
SOCIAL PLANNING
SOCIAL SCIENCES
SOCIAL SECURITY
SOCIAL SERVICE
SOCIAL SERVICE, PSYCHIATRIC
SOCIAL WELFARE
SOCIALISM
SOCIETIES (all headings)
SPECIALTIES, DENTAL
SPECIALTIES, MEDICAL
SPECIALTIES, NURSING
STATE DENTISTRY
STATE MEDICINE
TRAINING SUPPORT (if other
(than U.S.)
UNIVERSITIES
URBAN POPULATION
URBAN RENEWAL
URBANIZATION
VITAL STATISTICS

WATER POLLUTION
WATER POLLUTION, CHEMICAL
WATER POLLUTION, RADIOACTIVE

WATER POLLUTION, THERMAL
WATER SUPPLY
WORKMEN'S COMPENSATION

Additional main headings to be subdivided geographically are those for the specialties, Medicine, Science, Dentistry, etc., and those that have the topical subheading: "education," "history," "mortality," "occurrence," "prevention & control," or "supply & distribution," or the form subheading "legislation," or "statistics." Directories of specialists in the field, history of the practice in one locality, etc. are given the specialty heading subdivided by place.

Six topical subheadings which are not used for indexing serials and do not, therefore, appear in the list of Subheadings are necessary for the cataloging of books and periodicals.

IN ADOLESCENCE (C,E,F,G)
IN ADULTHOOD (C,E,F,G)
IN INFANCY & CHILDHOOD (C,E,F,G)
IN MIDDLE AGE (C,E,F,G)
IN OLD AGE (C,E,F,G)
IN PREGNANCY (C,E,F,G)

CATLINE
APPENDIX B

8.9 GEOGRAPHIC SUBHEADINGS

Medical Subject Headings (MeSH) always lists in the introduction, main subject headings that may be subdivided geographically by catalogers. The list below represents the geographic locations used by NLM to subdivide those main headings. This list will be expanded as time goes on to conform to the list prepared by the National Libraries Task Force. Additional main headings to be subdivided geographically are those that have the following topical subheadings: EDUCATION; HISTORY; SUPPLY & DISTRIBUTION.

Geographic Headings and Cross-References

su indicates a see under reference

ADEN su ARABIA	ARUBA su NETHERLANDS ANTILLES
ADMIRALTY ISLANDS su MELANESIA	ASCENSION su ATLANTIC ISLANDS
AEGEAN ISLANDS su MEDITERRANEAN ISLANDS	ASIA
AFGHANISTAN	ASIA, SOUTHWESTERN
AFRICA	ASIA, WESTERN
AFRICA, BRITISH EAST	ASSYRIA
AFRICA, CENTRAL	ATLANTIC ISLANDS
AFRICA, EASTERN	AUSTRAL ISLANDS su POLYNESIA
AFRICA, FRENCH EQUATORIAL	AUSTRALIA
AFRICA, FRENCH WEST	AUSTRIA
AFRICA, ITALIAN EAST	AZERBAIJAN
AFRICA, NORTHERN	AZORES
AFRICA, SOUTHERN	BABYLONIA
AFRICA, WESTERN	BAHAMAS
ALABAMA	BAHREIN su ARABIA
ALASKA	BAKER ISLAND su POLYNESIA
ALBANIA	BALEARIC ISLANDS su MEDITERRANEAN ISLANDS
ALBERTA	BALTIC STATES
ALDERNEY su CHANNEL ISLANDS	BANGLADESH
ALEUTIANS su ALASKA	BARBADOS su WEST INDIES
ALGERIA	BARRA su HEBRIDES
AMERICA	BASHKIRIA
ANDORRA	BASUTOLAND su LESOTHO
ANGOLA	BAVARIA
ANNOBON ISLAND su ATLANTIC ISLANDS	BECHUANALAND su BOTSWANA
ANTARCTIC REGIONS	BELGIAN CONGO
ANTIGUA su WEST INDIES	BELGIUM
APPALACHIAN REGION	BELORUSSIA
ARABIA	BERLIN
ARCTIC REGIONS	BERMUDA
ARGENTINA	BHUTAN
ARIZONA	BIAFRA su NIGERIA
ARKANSAS	BISMARCK ISLANDS su MELANESIA
ARMENIA	

BOLIVIA
BONAIRE su NETHERLANDS ANTILLES
BORNEO
BOSNIA AND HERZEGOVINA
BOSTON
BOTSWANA
BRAZIL
BRITISH COLUMBIA
BRITISH GUIANA
BRITISH HONDURAS
BRUNEI su MALAYSIA
BULGARIA
BURMA
BURUNDI

CALIFORNIA
CAMBODIA
CAMEROON
CANADA
CANAZ ZONE su PANAMA CANAL ZONE
CANARY ISLANDS su ATLANTIC ISLANDS
CAROLINE ISLANDS su MICRONESIA
CAYMAN ISLANDS su JAMAICA
CELEBES su INDONESIA
CENTRAL AFRICAN REPUBLIC
CENTRAL AMERICA
CEYLON
CHAD
CHANNEL ISLANDS
CHICAGO
CHILE
CHINA
COLOMBIA
COLORADO
COMORO ISLANDS su INDIAN OCEAN
ISLANDS
CONGO
CONGO (REPUBLIC OF)
(BRAZZAVILLE) su CONGO
CONGO (REPUBLIC OF THE)
(LEOPOLDVILLE) su CONGO
CONNECTICUT
COOK ISLANDS su POLYNESIA
CORSICA su MEDITERRANEAN ISLANDS
COSTA RICA
CRETE su MEDITERRANEAN ISLANDS
CROATIA
CUBA
CURACAO su NETHERLANDS ANTILLES
CYPRUS
CZECHOSLOVAKIA

DAGESTAN
DAHOMEY
DELAWARE

DENMARK
DISTRICT OF COLUMBIA
DODECANESE ISLANDS su MEDITERRANEAN
ISLANDS
DOMINICAN REPUBLIC

EASTER ISLAND su POLYNESIA
ECUADOR
EGYPT
ELICE ISLANDS su POLYNESIA
EL SALVADOR
ENGLAND
ERITREA su ETHIOPIA
ESTONIA
ETHIOPIA
EUROPE
EUROPE, EASTERN

FAEROE ISLANDS su DENMARK
FALKLAND ISLANDS su ATLANTIC ISLANDS
FALKLAND ISLANDS DEPENDENCIES su
ANTARCTIC REGIONS
FAR EAST
FERNANDO POO su ATLANTIC ISLANDS
FIJI ISLANDS su MELANESIA
FINLAND
FLORIDA
FORMOSA su TAIWAN
FRANCE
FRENCH GUIANA
FRENCH GUINEA su GUINEA
FRENCH SOMALILAND su AFRICA,
EASTERN

GABON
GALAPAGOS ISLANDS su ECUADOR
GAMBIA
GAMBIER ISLANDS su POLYNESIA
GEORGIA
GEORGIAN SSR
GERMANY (use only for historic
material)
GERMANY, EAST
GERMANY, WEST
GHANA
GILBRALTAR
GILBERT ISLANDS su MICRONESIA
GOLD COAST
GOUGH ISLAND su ATLANTIC ISLANDS
GRANADA su WEST INDIES
GT. BRIT.
GREAT LAKES REGION
GREECE
GREENLAND
GUADELOUPE su WEST INDIES

GUAM su MICRONESIA
GUATEMALA
GUERNSEY su CHANNEL ISLANDS
GUINEA
GUINEA, FRENCH su GUINEA
GUINEA, PORTUGUESE su GUINEA
GUINEA, SPANISH su GUINEA
GUYANA

HAITI
HARRIS su HEBRIDES
HAWAII
HEBRIDES
HONDURAS
HONG KONG
HUNGARY

ICELAND
IDAHO
IFNI su AFRICA, WESTERN
ILLINOIS
INDIA
INDIAN OCEAN ISLANDS
INDIANA
INDOCHINA su CAMBODIA; LAOS
THAILAND; VIETNAM
INDOCHINA, FRENCH
INDONESIA
IONOAN ISLANDS su MEDITERRANEAN
ISLANDS

IOWA
IRAN
IRAQ
IRELAND
ISLAM
ISLAY su HEBRIDES
ISLE OF MAN su GREAT BRITAIN
ISRAEL
ITALY
IVORY COAST

JAMAICA
JAPAN
JAVA su INDONESIA
JERSEY su CHANNEL ISLANDS
JOHNSTON ISLAND su SOUTH PACIFIC
ISLANDS
JORDAN

KANSAS
KATANGA su CONGO
KAZAKHSTAN
KENTUCKY
KENYA
KIRGHIZIA

KOREA
KUWAIT

LACCADIVE ISLANDS su INDIAN OCEAN
ISLANDS
LAOS
LAPLAND su ARCTIC REGIONS
LATIN AMERICA
LATVIA
LEBANON
LESOTHO
LESSER SUNDA ISLANDS su NETHERLANDS
EAST INDIES
LEWIS su HEBRIDES
LIBERIA
LIBYA
LIECHTENSTEIN
LISIANSKI ISLAND su HAWAII
LITHUANIA
LONDON
LOUISIANA
LUXEMBOURG

MACAO su HONG KONG
MADAGASCAR
MADEIRA su ATLANTIC ISLANDS
MADOERA su INDONESIA
MAINE
MALAGASY REPUBLIC
MALAWI
MALAY ARCHIPELAGO su INDONESIA
MALAYA FEDERATION
MALAYSIA
MALDIVE ISLANDS su INDIAN OCEAN
ISLANDS
MALI
MALTA su MEDITERRANEAN ISLANDS
MANCHURIA su CHINA
MANITOBA
MARIANA ISLANDS su MICRONESIA
MARQUESAS ISLANDS su POLYNESIA
MARSHALL ISLANDS su MICRONESIA
MARTINIQUE su WEST INDIES
MARYLAND
MASSACHUSETTS
MAURITANIA su AFRICA, WESTERN
MAURITIUS su INDIAN OCEAN ISLANDS
MEDITERRANEAN ISLANDS
MEKONG VALLEY
MELANESIA
MESOPOTAMIA
MEXICO
MICHIGAN
MICRONESIA
MID ATLANTIC REGION

MIDDLE EAST su ASIA, WESTERN
MIDWAY su HAWAII
MINNESOTA
MISSISSIPPI
MISSOURI
MOLDAVIA
MOLUCCAS su NETHERLANDS EAST INDIES
MONACO
MONGOLIA
MONTANA
MONTENEGRO
MONTSERRAT su WEST INDIES
MOROCCO
MOSCOW
MOZAMBIQUE
MULL su HEBRIDES
MUSCAT AND OMAN su ARABIA

NAURU su MICRONESIA
NEAR EAST su ASIA, WESTERN
NEBRASKA
NEPAL
NETHERLANDS
NETHERLANDS ANTILLES
NETHERLANDS EAST INDIES
NEVADA
NEVIS su WEST INDIES
NEW BRITAIN su MELANESIA
NEW BRUNSWICK
NEW CALEDONIA su MELANESIA
NEW ENGLAND
NEW GUINEA
NEW HAMPSHIRE
NEW HEBRIDES su MELANESIA
NEW IRELAND su MELANESIA
NEW JERSEY
NEW MEXICO
NEW YORK
NEW YORK CITY
NEW ZEALAND
NEWFOUNDLAND
NICARAGUA
NIGER
NIGERIA
NIUE su POLYNESIA
NORFOLK ISLAND su MELANESIA
NORTH AMERICA
NORTH CAROLINA
NORTH DAKOTA
NORTH UIST su HEBRIDES
NORTHERN IRELAND
NORTHERN RHODESIA su ZAMBIA
NORWAY
NOVA SCOTIA
NYASALAND

OCEANIA su SOUTH PACIFIC ISLANDS
OHIO
OKINAWA su FAR EAST
OKLAHOMA
ONTARIO
OREGON
ORKNEY ISLANDS su GREAT BRITAIN

PAKISTAN
PALESTINE
PANAMA
PANAMA CANAL ZONE
PAPUA su NEW GUINEA
PARAGUAY
PARIS
PAULAU ISLANDS su MICRONESIA
PEARL AND HERMES REEF su HAWAII
PEMBA su INDIAN OCEAN ISLANDS
PENNSYLVANIA
PERSIA
PERU
PHILIPPINE ISLANDS su PHILIPPINES
PHILIPPINES
PHOENIX ISLANDS su POLYNESIA
PITCAIRN ISLAND su POLYNESIA
POLAND
POLYNESIA
PORTUGAL
PORTUGUESE GUINEA su GUINEA
PRINCE EDWARD ISLAND
PRINCIPE ISLAND su ATLANTIC ISLANDS
PUERTO RICO

QATAR su ARABIA
QUEBEC

REUNION su INDIAN OCEAN ISLANDS
RHODE ISLAND
RHODESIA
RHODESIA & NYASALAND
RHODESIA, NORTHERN
RHODESIA, SOUTHERN
RIO MUNI su AFRICA, WESTERN
ROME
RUANDA su RWANDA
RUANDA-URUNDI
RUMANIA
RUSSIA (PRE-1917) (use only for
historic material)
RUSSIAN FEDERATION (ASIA)
RUSSIAN FEDERATION (EUROPE)
RWANDA
RYUKYU ISLANDS su FAR EAST

SABAH su MALAYSIA

SAHARA su ALGERIA
SAMOA, WESTERN su WESTERN SAMOA
SAMOAN ISLANDS su POLYNESIA;
WESTERN SAMOA
SAN MARINO
SAO TOME ISLAND su ATLANTIC ISLANDS
SARAWAK su MALAYSIA
SARDINIA su MEDITERRANEAN ISLANDS
SARK su CHANNEL ISLANDS
SASKATCHEWAN
SAUDI ARABIA su ARABIA
SCANDINAVIA
SCOTLAND
SCYTHIA
SENEGAL
SERBIA
SEYCHELLES su INDIAN OCEAN ISLANDS
SHETLAND ISLANDS su GT. BRIT.
SIAM
SIBERIA su RUSSIAN FEDERATION (ASIA)
SICILY
SIERRA LEONE
SILESIA
SINGAPORE
SINKLANG su CHINA
SKYE su HEBRIDES
SLOVENIA
SOCIETY ISLANDS su POLYNESIA
SOLOMON ISLANDS su MELANESIA
SOMALIA
SOMALILAND
SOMALILAND, ITALIAN
SOUTH AFRICA
SOUTH AMERICA
SOUTH CAROLINA
SOUTH DAKOTA
SOUTH GEORGIA su ANTARCTIC REGIONS
SOUTH PACIFIC ISLANDS
SOUTH UIST su HEBRIDES
SOUTHERN RHODESIA su RHODESIA
SOUTH-WEST AFRICA su AFRICA, SOUTHERN
SOVIET UNION su U.S.S.R
SPAIN
SPANISH GUINEA su GUINEA
SPANISH SAHARA su AFRICA, WESTERN
SRI LANKA
ST. HELENA su ATLANTIC ISLANDS
ST. KITTS su WEST INDIES
ST. LUCIA su WEST INDIES
ST. PIERRE AND MIQUELON su CANADA
ST. VINCENT su WEST INDIES
SUDAN
SUMATRA su INDONESIA
SURINAM
SWAZILAND su AFRICA, SOUTHERN

SWEDEN
SWITZERLAND
SYRIA
TADZHIKISTAN
TAIWAN
TANGANYIKA su TANZANIA
TANZANIA
TASMANIA su AUSTRALIA
TENNESSEE
TEXAS
THAILAND
TIBET su CHINA
TIMOR
TOBAGO su WEST INDIES
TOGO
TOKELAU ISLANDS su POLYNESIA
TOKYO
TONGA ISLANDS su POLYNESIA
TRANSYLVANIA
TRINIDAD
TRISTAN DA CUNHA su ATLANTIC ISLANDS
TROBRIAND ISLANDS su MELANESIA
TUAMOTU ISLANDS su POLYNESIA
TUNISIA
TURKEY
TURKMENISTAN
TURKS AND CAICOS ISLANDS su WEST
INDIES
UGANDA
UKRAINE
UNION OF SOUTH AFRICA su SOUTH AFRICA
UNITED ARAB REPUBLIC su EGYPT
UNITED KINGDOM su GREAT BRITAIN
U. S.
UPPER VOLTA
URUGUAY
U. S. S. R.
UTAH
UZBEKISTAN
VATICAN CITY
VENEZUELA
VERMONT
VIETNAM
VIRGIN ISLANDS su WEST INDIES
VIRGINIA
WAKE ISLAND su POLYNESIA
WALES
WALLIS AND FUTUNA ISLANDS su
POLYNESIA
WASHINGTON
WEST INDIES

WEST VIRGINIA
WESTERN SAMOA
WISCONSIN
WYOMING

YEMEN
YUGOSLAVIA

ZAMBIA
ZANZIBAR su TANZANIA

CATLINE
APPENDIX C

8.10 LANGUAGE SUBHEADINGS

Listed below are the language subheadings used by NLM:

AFRIKAANS	LITHUANIAN
ALBANIAN	MAORI
ARABIC	MARATHI
ARMENIAN	MASAI
AZERBAIJANI	MALAY
BASHKIR	MOLDAVIAN
BELORUSSIAN	MONGOL
BENGALI	MULTILINGUAL
BULGARIAN	NORTHERN AMERICAN INDIAN (OTHER)
BURMESE	NORWEGIAN
CATALAN	PERSIAN, MODERN
CENTRAL AMERICAN INDIAN (OTHER)	POLISH
CHINESE	PORTUGUESE
CZECH	PUSHTO
DANISH	RUMANIAN
DUTCH	RUSSIAN
ENGLISH	SERBO-CROATIAN (CYRILLIC)
ESPERANTO	SERBO-CROATIAN (ROMAN)
ESTONIAN	SHONA
FINNISH	SLAVIC (OTHER)
FRENCH	SLOVAK
GAEILIC	SLOVENE
GEORGIAN	SPANISH
GERMAN	SWAHILI
GREEK, MODERN	SWEDISH
HAUSA	TAGALOG
HEBREW	TAMIL
HINDU	TELUGU
HUNGARIAN	THAI
ICELANDIC	TIBETAN
INDONESIAN	TURKISH
INTERLINGUA	TURKOMAN
ITALIAN	UKRAINIAN
JAPANESE	URDU
KAZAKH	VIETNAMESE
KIRGHIZ	WELSH
KOREAN	XHOSA
LATIN	YIDDISH
LATVIAN	ZULU

CATLINE
APPENDIX D

8.11 LANGUAGES

AFR - AFRIKAANS
ALB - ALBANIAN
ARA - ARABIC
ARM - ARMENIAN
AZE - AZERBAIJANI
BEL - BELORUSSIAN
BEN - BENGALI
BUL - BULGARIAN
BUR - BURMESE
CAI - CENTRAL AMERICAN INDIAN
 (OTHER)
CAT - CATALAN
CHI - CHINESE
CZE - CZECH
DAN - DANISH
DUT - DUTCH (1401-)
ENG - ENGLISH
ESK - ESKIMO
ESP - ESPERANTO
EST - ESTONIAN
FIN - FINNISH
FRE - FRENCH (1600-)
GAE - GAELIC
GEO - GEORGIAN
GER - GERMAN (1350-)
GRE - GREEK, MODERN
HAU - HAUSA
HEB - HEBREW
HIN - HINDI
HUN - HUNGARIAN
ICE - ICELANDIC
IND - INDONESIAN
INT - INTERLINGUA
ITA - ITALIAN
JPN - JAPANESE
KIR - KIRGHIZ

KOR - KOREAN
LAT - LATIN
LAV - LATVIAN
LIT - LITHUANIAN
MAO - MAORI
MAR - MARATHI
MAS - MASAI
MUL - MULTILINGUAL
NAI - NORTH AMERICAN INDIAN
 (OTHER)
NOR - NORWEGIAN
PER - PERSIAN, MODERN
POL - POLISH
POR - PORTUGUESE
PUS - PUSHTO
RUM - ROMANIAN, RUMANIAN
RUS - RUSSIAN
SCC - SERBO-CROATIAN (CYRILLIC)
SCR - SERBO-CROATIAN (ROMAN)
SLO - SLOVAK
SLV - SLOVENE
SPA - SPANISH
SWA - SWAHILI
SWE - SWEDISH
TAG - TAGALOG
TAM - TAMIL
TEL - TELUGU
THA - THAI
TIB - TIBETAN
TUR - TURKISH
UKR - UKRAINIAN
UND - UNDETERMINED
URD - URDU
VIE - VIETNAMESE
WEL - WELSH

AVLINE

9.1 INTRODUCTION

AVLINE is NLM's AudioVisual catalog onLINE and represents bibliographic and review data for non-print materials in the health sciences. AVLINE material has been categorized as follows:

Category A: Materials exhibiting a purposeful choice and integration of media in support of content and educational intent; most often accompanied by educational objectives, instructional guides and self-evaluation materials.

Category B: Materials representing predominantly documentation of scheduled educational events, such as lectures, grand rounds, seminars, continuing education courses, society meetings, etc.

Category A material is processed through the Association of American Medical Colleges (AAMC) review procedure. After technical screening, and descriptive cataloging at NLM, each piece is sent to the AAMC for review. The AAMC sends the piece to two members of their panel of over 1400 experts located in health education centers throughout the country. Each of the two expert reviewers appraises the piece and one writes a critical review. When this review data arrives back at NLM, the critical review is edited and the review data is added to the cataloging record in AVLINE.

Category B material is processed through an abbreviated procedure. After technical quality screening, catalogers at NLM do both the descriptive and subject cataloging. The citation is then added to AVLINE without an abstract or review data. The only element in the Review Data (RD) field is the term "none".

Approximately 100-200 items are added per month to AVLINE.

9.1.1 AVLINE PUBLICATIONS

Portions of the AVLINE data base have been published and are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. "Not Recommended" titles and titles pending review are currently excluded from publication. Printed listings include the following:

- 1) The National Library of Medicine AVLINE Catalog, 1975-1976 covers 2400 titles added to the database from November 1975 through December 1976. It contains only a Subject Section listing bibliographic and review data, and a Procurement Source Section. Abstracts are not included. No access by title or names is provided. GPO order number and catalog number are: S/N 017-052-00183-3; HE 20.3602: AV2/975-76.

-) The AVLNE citations which appeared in the AVLNE section of the 1977 quarterly issues of Current Catalog have been cumulated in a separate publication called the National Library of Medicine Audiovisuals Catalog, Annual Cumulation 1977. It contains three sections: Subject Section, Name>Title Section which has full bibliographic information including abstracts and review data, and Procurement Source Section. GPO order number is: S/N 017-052-00192-2.
-) Beginning in 1978, current coverage of audiovisual titles cataloged each quarter has been provided through the National Library of Medicine Audiovisuals Catalog. This catalog has three quarterlies with the fourth being an annual cumulation. It has the same three sections as the Annual Cumulation 1977 above: Subject Section, Name>Title Section, and Procurement Source Section. With the exception of audiovisual serials, audiovisual titles will no longer appear in Current Catalog. Titles which are not recommended or pending review will continue to be excluded from this publication, although found in the AVLNE data base. GPO order code: NLMAC
-) The National Medical Audiovisual Center Catalog; Audiovisuals for the Health Scientist lists 16 mm motion pictures and 3/4-inch videocassettes available on short-term free loan from NMAC in Atlanta, Georgia. The catalog has two sections - Subject Section lists bibliographic and review data with each citation; the Name>Title Section includes abstracts. It is a subset of AVLNE. GPO order number and catalog number are: S/N 017-052-00181-7; HE 20.3608/4:977.

.1.2 AVLNE SPECIAL PROJECTS

In February 1978, NLM, in cooperation with the Health Sciences Communication Association (HeSCA), initiated an experimental Cataloging in Publication (CIP) program for audiovisuals. In a process similar to the CIP program for books, NLM has agreed to catalog non-print media from pre-release information supplied by producers. A typed catalog card is returned to the producer for incorporation into the media itself when it is released for distribution. The CIP cataloging is entered in AVLNE and will be updated as necessary when the title is received at NLM.

.2 CATALOGING STANDARDS

The Anglo American Cataloging Rules, Chapter 12, revised in September 1975, is the basic authority for cataloging standards for AVLNE. Chapter 12 has adopted the International Standard for Bibliographic Description of Monographs (ISBD-M). Chapters 6 (revised 1974) and 14 (revised 1976) are also used.

NLM's interpretation of AACR Chapter 12, however, deviates in some ways from Library of Congress practice. NLM's choice of main entry is almost always Title. Added entries are made for all necessary responsible bodies and/or credits. In addition, standard bibliographic data has been expanded to include information on the rating, review panel and audience levels in the general notes fields. Also, because Review panels in the past reviewed each part of an AV as a separate regardless of whether the item justified its own entry, the cataloging may reflect parts analytics rather than treatment of the entire work as a work-in-part under a collective title. Current policy is to create parts analytics only for those items which are discrete units in themselves and for which separate cataloging can be justified.

The basic rules and interpretations of those rules as applied by the National Library of Medicine are discussed in a syllabus available from the Medical Library Association entitled Audiovisuals Cataloging for Biomedical Materials (CE 47).

9.3 LOAN AND SALE INFORMATION

Information on the loan or sale source and price for each item in AVLINE is contained in the Procurement Source (PC) field and the Price (PR) field. The addressees of sources listed in the (PC) field can be found in the NAME AUTHORITY FILE. NLM does not lend any audiovisual items on interlibrary loan.

9.4 ENTERING THE AVLINE FILE

To access AVLINE, authorized subscribers should enter the command FILE AVLINE after logging into ELHILL at NLM.

9.5 AVLINE UNIT RECORD

The AVLINE unit record is the computer-stored information representing one audiovisual item. The table below lists all the data elements with their two-letter print qualifiers and their two-letter search qualifiers. The table also indicates which elements are directly searchable and which will be displayed as a result of the standard PRINT commands for AVLINE.

The AVLINE Unit Record

NAME OF ELEMENT	SEARCHABLE	SEARCH QUALIFIER	PRINT QUALIFIER	TEXT WORD SEARCHING	PRT DETAILED	PRT FULL	PRT	PRT LOAN	PRT SUMMARY
Main Heading	*	MH	MH		X	X			
Subheading	Topical	*	SH	MH	X	X			
	Others	*	SH	MH	X	X			
Country of Publication		*	CP	CP	X	X			
Tree Number		*	PP	PP	X	X			
Personal Name		*	PN	PN	X	X	X	X	
Corporate or Conference Name		*	CN	CN	*	X	X	X	
Personal Name as Subject		*	PS	PS	X	X	X	X	
Corporate Name as Subject		*	CS	CS	*	X	X	X	
Title(s)		*	TI	TI	*	X	X	X	X
Title Continuation				TC	X	X	X	X	X
Authorship Statement				AS	X	X	X	X	X
Title as Subject		*	TI	ST	X	X			
Edition Statement				ED	X	X	X	X	X
Imprint				IM	X	X	X	X	X
Collation				CO	X	X	X	X	X
Series Title	*	SE	SE	*	X	X	X	X	X
Personal Name/Series Title	*	PE	PE	*	X	X	X	X	X
Corporate Name/Series Title	*	CE	CE	*	X	X	X	X	X
General Notes				GN	X	X			
Continuing Education Credit Note				CR	X		X		

NAME OF ELEMENT	SEARCHABLE	SEARCH QUALIFIER	PRINT QUALIFIER	TEXT WORD SEARCHING	PRT DETAILED	PRT FULL	PRT	PRT LOAN	PRT SUMMARY
Bibliography Notes			BI		X	X			
Content Note			CT		X	X			
Dissertation Note			DT		X	X			
History Note			HN		X	X			
Limited Use Note			LN		X	X			
Bound With Note			BW		X	X			
Abstract			AB	*	X				
Call Number	*	CA	CA		X	X	X	X	X
Library Symbol	*	LI	CA		X	X	X	X	
Holdings			HO		X				
Shelving Location	*	SL	SL		X				
Dashed-on-Entry	*	DO	DO		X	X			
Procurement Source	*	PC	PC		X	X			X
Year of Publication (initial)	*	YR	YR		X	X			X
Price			PR		X	X			X
LC Card Number			LC		X	X			
Language	*	LA	LA		X				
Language of Summaries	*	LS	LS		X				
First/Last Issue			FL		X	X	X	X	X
Open/Closed Indicator	*	OC	OC		X				
Main Entry Type			MT		X	X	X	X	
Item Type	*	IT	IT		X	X			X
Run Time	*	RT	RT		X	X			
Review Data	*	RD	RD						
Review Date	*	RE	RE						
Physical Description	*	PH	PH						
Media	*	ME	ME						
Record Source	*	RS	RS		X		X		
Date of Entry	*	DA	DA		X	X	X		X
Date of Last Major Revision	*	MR	MR		X	X			
Date of Last Revision	*	LR	LR		X	X			
Revision Indicator	*	RI	RI		X				
VPROC Citation Number	*	AV	AV		X	X			
Citation Number	*	NO	NO		X	X	X	X	X
Text Words	*	TW	TW						

Note: RT, DA, MR, LR are rangeable.

Descriptions of each data element in the unit record follow:

.5.1 MAIN HEADINGS (MH)

Subject headings are assigned to AVLINE materials according to the instructions in the current Medical Subject Headings - Annotated Alphabetic List. Generally two or three print headings are assigned. Check tags referring to age groups are also used, but only when the identity of the age group is

considered significant in the material at hand. They are entered for searching as you would for MEDLINE and not as for CATLINE. Please note that should the age group aspect be the major point of the material, the terms could be used as major descriptors, i.e. printable in the catalog, rather than check tags.

INFANT
INFANT, NEWBORN
CHILD
CHILD, PRESCHOOL
ADOLESCENCE
ADULT
MIDDLE AGE
AGED

In the past, all AVLNE titles were indexed in much more depth according to rules of the NLM Index Section, using non-print headings and check tags extensively. This is no longer the case, and except for the policy regarding check tags, AVLNE titles can be searched by subject using the same strategies as for CATLINE.

Note: Many terms suffixed with "ology" or other terms referring to specialties are not used as subject headings unless the title is about the specialty itself. For example, search for eye diseases under that term and not under OPHTHALMOLOGY. The specialty headings are used for searching in the Review Data (RD) field. See Section 9.5.47 for more specifics.

9.5.2 SUBHEADINGS (SH)

Topical subheadings are the same as those used in the indexing of journal articles for Index Medicus. They are entered exactly as you enter subheadings for MEDLINE. Form subheadings are also added to all print main headings to indicate the media of the piece. See APPENDIX A for a list of Form Subheadings. Note that form subheadings are always in the plural while the media designator is singular. Form subheadings are carried in AVLNE as if they were main headings, and can be searched separately. Therefore, they should be ANDed with a subject term.

LANGUAGE DISORDERS AND AUDIOCASSETTES (SH)

Form subheadings which are further subdivided, e.g. AUDIOCASSETTES - PERIODICALS must be ANDed in a search.

LANGUAGE DISORDERS AND AUDIOCASSETTES (SH) AND PERIODICALS (SH)

9.5.3 COUNTRY (PLACE) OF PUBLICATION (CP) AND TREE NUMBER (PP)

The country or place of publication of the cataloged item is searchable using the place names in Category Z of MeSH, but the place names will not work in an EXPLODE. By using the Z Category MeSH Number, an explode-like capability may be used:

Note that the search query must be truncated and qualified. (No data is currently entered in these fields.)

9.5.4 PERSONAL NAME (PN)

The Personal Name field contains all personal names used as standard added entries or main entry. The first occurrence in this field is the main entry if the Main Entry Type (MT) is PERSONAL NAME MAIN ENTRY. Personal names are entered in the general format:

Surname, Forename

Middle name and/or initials and birth years may be added. Personal names appear in the (PN) field with a comma after the surname. Forenames may have periods or commas after the name in this field. Therefore, it is best to use the truncation symbol or colon (:) after the last definitely known character in the name. The name as entered for cataloging may have a birthdate, birth and death dates, or the designation of editor or compiler (ed., comp.). Without the use of the : sign, retrieval will only be achieved if the form of the name input exactly matches the form of the name in AVLINe including commas, periods, dashes, and modifiers.

Printed Form of Name

Pratt, Joseph Hyde, 1911-

Farrell, Frank

Crelin, E.S.

Search AVLINe Using

PRATT, JOSEPH:

FARRELL, FRANK:

CRELIN, E:

The # sign or variable character symbol may be used internally on a letter by letter basis. For example, if you are unsure whether the surname is spelled Smith or Smyth, you could enter SM#TH to retrieve both spellings.

9.5.4.1 DIACRITICS

Names and words which include diacritics should be entered into AVLINe without diacritics and without modifying the letter; for example, u is not entered as ue, but as u.

In the print format, however, a colon precedes any letter which originally contained a diacritic to indicate that it was modified.

Name

Kübler-Ross, Elisabeth

Search AVLINe Using

KUBLER-ROSS, ELISABETH

AVLINe Online Printout

K:UBLER-ROSS, ELISABETH

Note: If you request an Offline Print from AVLINe, any item which contains diacritics will have the actual diacritic printed preceding the letter it modifies, rather than the colon.

9.5.5 CORPORATE NAME (CN)

The corporate name field contains corporate and conference names used as main entries and standard added entries. The first name in this field is the main entry if the Main Entry Type (MT) field is CORPORATE NAME MAIN ENTRY. Corporate names are established by the NLM Catalog Section in the general format:

Name. Subdivision. Subdivision

American Gastroenterological Association
Wayne State University. School of Medicine
New York University. Medical Center, Institute
of Rehabilitation Medicine

Conference names are established by the NLM Catalog Section in the general format:

Conference Name, Number, Place, Year

Colloquium on the Bicentennial of Medicine in the United States
Bethesda, Md., 1976
Symposium: Nursing Care of the Patient with Cancer, Sloan
Kettering Cancer Center, 1975

Corporate names must be entered for name searching in their exact cataloging form with the exception that only one space is needed after every internal period. As with Main Headings, embedded AND's and OR's must be disguised using the variable character symbol (#).

9.5.5.1 TEXT WORD SEARCHING CAPABILITY (TW)

All corporate and conference names may be searched using the Text Word Searching Capability. If the first 36 characters of the corporate or conference name are not unique enough to specify your search, AND the name fragment with a distinguishing term in the name which occurs beyond the 36 characters. (Refer to PART 4 on Text Word Searching Capability). If you want:

University of Southern California. School of Medicine. Office
of Instructional Media Services

Search AVLNE using:

ALL UNIVERSITY OF SOUTHERN CALIFORNIA: AND MEDIA (TW)

/or/

(TW) MEDIA AND SOUTHERN AND CALIFORNIA

9.5.6 PERSONAL NAME AS SUBJECT (PS)

If a personal name has been used as a subject for a cataloged item, this name appears in the (PS) field. The search format is the same as for the Personal Name (PN) field.

9.5.7 CORPORATE NAME AS SUBJECT (CS)

If a corporate or conference name has been used as a subject for a cataloged item, this name appears in the (CS) field. The search formats are the same as those for the Corporate Name (CN) field including Text Word searching (TW).

9.5.8 TITLE (TI)

The Title field contains the short title to all works cataloged and any variant titles traced differently. If the title is the main entry of the work, the Main Entry Type (MT) is TITLE MAIN ENTRY. The first occurrence of the TI field is the main entry. To date, all records in AVLNE are TITLE MAIN ENTRY.

The short title from the body of the entry is always carried as the first occurrence of this field. If this title is to be traced, a capital letter G will be attached to the short title: TI - ATLAS OF THE OCULAR FUNDUS/G For records which are TITLE MAIN ENTRY, this title will not be traced since it is already an access point. If it is not to be traced, a letter N will appear following the short title: TI - EXPLORING THE HUMAN NERVOUS SYSTEM/N. Variant titles are carried as second and succeeding occurrences of the (TI) field. Generally, no G is displayed since all of these titles are traced by definition.

9.5.8.1 TITLE SEARCH KEY

All titles carried in the Title (TI) field can be searched by means of a search key constructed from the title. The search key is the first three letters of the first significant word in the title followed by a slash, and the first letter of each of the next three words, each separated by a slash. Words beyond the fourth word in the title are not used to construct the search key. If the first significant word has fewer than three letters, use the entire word, and do not insert a blank(s). Hyphenated or slashed words are treated as one word for search key construction. Single characters bounded by spaces on both sides are considered as one word. Initial articles in any language are disregarded (except for elided articles) but internal articles are not. Elided articles and contractions are included in the search key, but the apostrophe is dropped and the string is considered as one word. (Note: Most AVLNE titles are English.)

Only the words in the short title, or variant title, should be used to construct the search key. However, if the title is fewer than four words, truncate with a colon after the last known portion of the key and use a Text Word from the short title. This is because if the title is a variant title the medium designator is picked up as part of the title and used in constructing the title key. However, if the title is the main entry, the medium designator is put in the TC Title continuation field. Compare the following examples:

Title of the AV = The nurse and sexuality

- a) USER:
NUR/A/S
PROG:
NP (NUR/A/S)
- b) SS 3 /C?
USER:
ALL NUR/A/S: AND SEXUALITY (TW)
PROG:
SS (3) PSTG (1)
- SS 4 /C?
USER:
PRT TI, TC
PROG:
- 1
TI - VIEWPOINT : THE NURSE
AND SEXUALITY/N
TI - THE NURSE AND SEXUALITY
[FILMSTRIP]
TC -.[FILMSTRIP]
- Standard title key construction retrieves no postings
- Note that title has fewer than four words. Use truncation and Text Word search. This title is a variant title.
- The main entry title has its medium designator in the TC field.

Only the following characters are used in constructing a key; all other characters are deleted by the program:

26 alphabetic characters

0-9 numerals

ampersand (&)

It is wise to search by alternative methods in addition to the search key because the program may have inadvertently created a key contrary to the above rules.

Examples:

<u>Printed Title</u>	<u>AVLINE Search Key</u>	<u>Note</u>
The treatment of the intrabony pocket with three osseous walls	TRE/0/T/I	Initial article ignored; internal article used
Cryosurgery in the oral cavity	CRY/I/T/0	Internal article used
Prosthetic foot components	ALL PRO/F/C: AND FOOT (TW)	Fewer than 4 words in title
Fluorescent staining	ALL FLU/S: AND STAINING (TW)	"
Randy	ALL RAN: AND RANDY (TW)	"

Median nerve, part 4	MED/N/P/4	Use of number
2, 3-dpg and six weeks shelf life	2/3/A/S	Use of numbers; no blanks inserted
I dress the wound	I/D/T/W	No blanks inserted
I. V. admixtures: a pharmacy service	I/V/A/A	Each character bounded by spaces considered one word
T & B lymphocytes	T/&B/L	Each character bound by spaces considered one word; use of ampersand
The I.V. GTT and other approaches to diagnosing diabetes mellitus	IV/G/A/0	Characters NOT bounded by spaces
Rx information	ALL RX/I: AND RX (TW)	"
The operating-room team	ALL OPE/T: AND TEAM (TW)	Hyphenated word treated as one word

Titles in which the significant word begins with the letters 'ALL', 'EXP', 'NOT', 'YES', or 'AND' must have a # sign substituted for the first slash in the search key. If the # sign is not used, the program interprets these characters as the word ALL used in the multimeaning message, the abbreviation of the instruction EXPLODE, YES as an answer to various program questions, and the logical operators AND or NOT.

<u>Printed Title</u>	<u>AVLINE Search Key</u>
Allocating responsibility in the emergency room	ALL#R/I/T
Explorers: design, characteristics & use	EXP#D/C/& (also note use of the ampersand)
The Andrews straight wire appliance	AND#S/W/A

Please be advised that certain title search keys may not be used interchangeably between AVLINE and SERLINE. SERLINE keys differ from AVLINE keys in the following ways:

1. elided articles: SERLINE drops the apostrophe and considers the string as two words
2. fewer than three letters in first word: SERLINE inserts one blank before the first slash

3. hyphenated words: SERLINE treats as one word if the parts cannot stand alone; but as two words if parts can stand alone (often both versions are supplied)
4. ampersand: SERLINE always translates to mean and in the language of the title

9.5.8.2 TEXT WORD SEARCHING CAPABILITY

The title field can also be searched using the Text Word Searching Capability. It can be used alone or in conjunction with a title search key or author, etc.

The title:

The anterolateral abdominal wall

may be searched with:

ANTEROLATERAL (TW) AND ALL ANT/A/W:

The title and author:

Distal tibial artery bypass with autogenous vein graft,
by Michael De Bakey

may be searched with:

DISTAL (TW) AND DE BAKEY, M:

9.5.9 TITLE CONTINUATION (TC)

The Title Continuation element contains subtitles, parallel titles and/or translated titles for items cataloged. This field is printable and not directly searchable. AVLNE media designators for the main entry title are held in this field.

9.5.10 AUTHORSHIP STATEMENT (AS)

If the work contains an authorship statement or an editor or compiler statement, the data is displayed in this field. The field is printable but not directly searchable.

9.5.11 EDITION STATEMENT (ED)

If the work which was cataloged had an indication of its edition, this information is shown in the edition statement which is printable but can only be searched using the STRINGSEARCH capability.

9.5.12 FIRST/LAST ISSUE (FL)

All serials have the date of the first issue in this field. Those which have ceased publication or have been continued or superseded by another, have the dates of the first issue and the last issue in the (FL) field. This field is printable but searchable only through the STRINGSEARCH capability.

9.5.13 IMPRINT (IM)

The imprint statement includes the place of publication, the publisher, and the year of publication and/or copyright date. Each element in the imprint statement is separated by a colon(:) because of the computer requirements for the printing of the NLM Audiovisuals Catalog. If the data has been bracketed, brackets will print if the character is available on your terminal. The imprint field is printable but not directly searchable. If the availability differs from that implied in the imprint statement, the additional information follows in brackets. EXAMPLE: Scarsdale, N Y : Steve Campus Productions : [for sale by Campus Film Distributors], c1975.

9.5.14 COLLATION (CO)

The collation field contains the physical description of the media. This is a printable field. If you wish to search for size, color or black and white, etc., these elements may be searched using the terms in the Physical Description (PH) field. The runtime has a unique field, (Run time;RT), as well as being a part of the collation. The Collation field displays in the format:

1 REEL, 20 MIN. : SD., COL.; 16 MM.

9.5.15 SERIES TITLE (SE)

The Series Title field contains all series notes and series added entries which are titles. (Author-title series added entries are contained in the (PE) or (CE) fields discussed below). The series note is always the first occurrence of this field. If it is traced in the same form, a capital G will follow the note. Any series titles traced differently will be printed in the second and subsequent occurrences of this field or the series fields below. All series now have the medium designator before the volume designator and number.

This series field is directly searchable using the first 36 characters of the print string in conjunction with the Truncation Symbol (:). If you are uncertain of the media type or the series numbering, truncate at the end of the title with the colon.

Printed Series Title

Clinical pathology series

Tuberculosis laboratory procedures

Psychiatric nursing [Filmstrip] ;
lesson 6

Recognition and management of the
neonate with heart disease [slide];
pt. 4

Search AVLINE Using

CLINICAL PATHOLOGY SERIES:

TUBERCULOSIS LABORATORY PROCEDURES:

PSYCHIATRIC NURSING:

RECOGNITION A#D MANAGEMENT OF THE
N:

9.5.15.1 TEXT WORD SEARCHING CAPABILITY (TW)

All series notes and added entries (SE, PE, CE) are searchable using the Text Word search capability. Use the same search strategy as suggested under Corporate Name Text Word searching. (Refer also to section on Text Word Searching in PART 4.)

9.5.15.2 TRACINGS FOR SERIES

Because AACR Chapter 12 requires that any series which are traced be traced with the media designators, all traced series are entered again in the second occurrence of the SE, CE, or PE field with the media designator added. The tracing designator G is omitted because it is understood that the second occurrence of these fields is always traced.

SE - Pediatric basics//N
SE - Pediatric basics Motion picture

9.5.16 PERSONAL NAME/SERIES TITLE (PE)

9.5.17 CORPORATE NAME/SERIES TITLE (CE)

If the cataloged item requires an author-title series added entry, it will appear in the Personal Name Series Title (PE) field if the author name is a personal name. If the author name is a corporate or a conference name, the series added entry is carried in the Corporate Name Series Title (CE) field. Both these fields are searchable using either Text Words or the first 36 characters of the printed form of the series. If the series form requires more than 36 characters, use the Truncation Symbol (:) as the last character.

Printed Series Title

U. S. Army. Medical Dept.
Continuing education program

Search AVLINe Using

U. S. ARMY. MEDICAL DEPT.
CONTINUING:

9.5.18 NOTES

All notes (9.5.19 - 9.5.25) in AVLINe have been differentiated as to type of note for MARC conversion purposes. All notes, regardless of type, are printable and may be searched only by using the STRINGSEARCH capability.

9.5.19 GENERAL NOTES (GN)

The AVLINe General Notes field contains all data not applicable to the specific types listed below. Therefore, all notes on the Review Panel, Rating, Audience level and other bibliographic notes are contained in this field. Although the (GN) field is not directly searchable all review data is directly searchable in the Review Data (RD) field.

9.5.20 BIBLIOGRAPHY NOTE (BI)

If the item cataloged contains a bibliography, it is noted in this field.

9.5.20a CONTINUING EDUCATION CREDIT NOTE (CR)

This print only field contains the specific type and number of CE units for the title. Use the review data (RD) tag, CE CREDIT, to search for items with CE credits available.

9.5.21 CONTENT NOTE (CT)

If the contents of a work are enumerated, the data is added to this field.

9.5.22 DISSERTATION NOTE (DT)

If the item cataloged was presented as a thesis or dissertation, a note to that effect is carried in this field.

9.5.23 HISTORY NOTE (HN)

This field contains any notes which explain the bibliographic history of the item cataloged, such as translations, earlier editions, etc.

9.5.24 LIMITED USE NOTE (LN)

If the item cataloged has any limitations on its distribution or availability, a note is made in this field.

9.5.25 BOUND WITH NOTE (BW)

If the item cataloged has been issued together with other bibliographic items, a note to that effect is made in this field.

9.5.26 ABSTRACT (AB)

Abstracts for AVLINE items appear in this field. There are three types of abstracts according to their origin. Those supplied by the reviewers as part of the appraisal process are tagged CRITICAL; those which are producer-supplied are tagged PRODUCER; and those without a tag were supplied by an outside abstracting organization. All abstract terms are directly searchable using the Text Word Searching capability. Refer to PART 4 of the Manual for more specific instructions regarding Text Word searching.

9.5.27 CALL NUMBER (CA)

Suggested classification numbers have been assigned to all AVLINE items. Some numbers are entered in brackets with the 0XNLM library symbol which indicates that NLM does not own the piece or class the piece under that number; they are assigned only for the purpose of aiding libraries that need classification information. Items owned by NLM are classified with the 04NLM library symbol and are shelflisted by use of a two-letter code which indicates the medium of the physical item NLM owns and shelves. (See Appendix B, Section 9.9, for media codes) This media code may be different from the bracketed medium designator after the title because NLM may have an authorized video-tape copy of an item which is available for purchase or loan in a different format. The portion of the shelf-list number after the media code is simply an NLM accession number.

Call numbers can be uniquely searched by entering the exact number. (Be sure to include all spaces and periods.) For example:

WE 500 VC NO.2 1968

PROG:

SS (1) PSTG (1)

Broader searching can be done by inputting the class number up to the second space. For example:

WE 500
PROG:
SS (1) PSTG (4)

No truncation is needed in this method of searching. Use of the NEIGHBOR command illustrates that the general class number has its own separate tally of postings which equals the sum of the call numbers beginning with that general class number:

NBR WE 500
PROG:

POSTINGS TERM
1 WE 350 MP16 NO.1 1971 (CA)
1 WE 350 SC NO.1 1975 (CA)
4 WE 500 (CA)
1 WE 500 FC NO. 1 1969 (CA)
1 WE 500 ST NO.1 1971 (CA)

UP N OR DOWN N?

USER:
5
PROG:

1 WE 500 VC NO.1 1969 (CA)
1 WE 500 VC NO.2 1968 (CA)
1 WE 544 (CA)
1 WE 544 SL NO.1 1973 (CA)
4 WE 550 (CA)

UP N OR DOWN N?

CIP records in AVLNE may be identified by a (P) following the classification number; by the phrase "cataloging in publication" in the general notes field, and by the tag "CIP" in the Review Data (RD) field. This latter tag provides an easy way to search for CIP records. CIP records also carry the review tag "pending". An updated CIP record will contain REV.CIP in the (RI) field.

CA - WE 715 SC No.2 1978 (P):04NLM
RD - CIP
RD - PENDING
GN - CATALOGING IN PUBLICATION

9.5.28 LIBRARY SYMBOLS (LI)

The Library Symbol field is directly searchable. For now, the only symbols assigned are 0XNLM and 04NLM. In the future it will be possible to search any library symbols assigned to any items.

9.5.29 HOLDINGS (HO)

The Holdings field will be used to indicate NLM's holdings against a particular title. Holdings for currently cataloged items will be indicated. Retrospective holdings will not be indicated. This field is printable but not searchable. No data for AVLNE is currently available.

9.5.30 SHELVING LOCATION (SL)

The Shelving Location data element can be printed and searched directly. At present the only shelving location used is LRC, which stands for Learning Resources Center, a non-circulating area of the Reference Section. DO NOT REQUEST AN INTER-LIBRARY LOAN FOR ITEMS SHELVED THERE.

9.5.31 DASHED-ON-ENTRY (DO)

The Dashed-on-entry field includes information on any supplements, and includes any separate call number for the Dashed-on-entry. These call numbers are searchable in the same manner as Call Numbers (CA) above.

9.5.32 PROCUREMENT SOURCE (PC)

The Procurement Source or distributor(s) are listed in this field. All names are searchable in the same manner as the Corporate Name (CN) or Personal Name (PN) fields. For addresses of distributors, search the name(s) listed in the Procurement Source field in the Name Authority File where they will have the tag Name Print Version (NA). Print the Address (AD) field.

9.5.33 YEAR OF PUBLICATION (YR) and (YR2)

The format of the year of publication field is:

M:1973:1977

Note that four-digit dates (not two-digit) are always used. The type of date is represented by a single alphabetic character:

M = Multiple Date - used for serials, works-in-part, and monographic series.

S = Single Date

C = Copyright Date

Q = Questioned Date

R = Reproduction

The date after the first colon is the initial year (YR) and the date after the second colon is the final year (YR2) for dates preceded by the letter M. Note that YR2 is a search qualifier only; YR is a search qualifier and the print qualifier. This field is rangeable, but because of the structure of this field YR dates must be ranged separately from YR2 dates. For example:

EYE DISEASES AND FROM 1970 TO 1978 (YR)
EYE DISEASES AND FROM 1970 TO 1978 (YR2)

The above examples when ANDed together will retrieve works-in-part or serials or monographic series begun and ceased during the nine year period 1970-78 dealing with the subject of eye diseases. (Warning: Ranging on YR2 may also retrieve dates preceded by the letters Q and C, in addition to the letter M.)

The following chart shows how NLM catalogers convert a date for input if the date on the piece being cataloged is fewer or more than four digits:

<u>Imprint Date</u>	<u>Values Entered in YR Field</u>	
	YR	YR2

19--	Q:1900:1978 (or year of cataloging)	
190-	Q:1901:1978 (or year of cataloging)	
191-	Q:1910:1978 (or year of cataloging)	
1910?	S:1910	
1973-74	M:1973:1974	
1977,c1975	C:1977:1975	
c1975	S:1975	
1976	S:1976	

The publication or copyright year is carried also in the Imprint (IM) field.

9.5.34 PRICE (PR)

The Price field contains information for both sale and loan prices in U.S. dollars, if available. Prices given are those available at the time of cataloging and are meant to be used as a guideline only. In addition, loan and/or sale order numbers are displayed if available. For example:

LOAN: FREE (NO. 301)

SALE: 100.00 (NO. 301)

If the price is unknown or complex, the phrase "Write for complete information" is given in the PR field. For the name of the sale and/or loan source, see the Procurement Source (PC) field. If more than one source is listed, the first listed price corresponds with the first listed source; the second price with the second source, etc. For addresses, search the procurement sources in the NAME AUTHORITY FILE. If a title is withdrawn from distribution, both the PC and PR fields are updated with the value "Withdrawn from distribution per producer."

9.5.35 LANGUAGE (LA)

Language in which the item is presented may be directly searched using the three-letter abbreviations attached in APPENDIX D of PART 8, CATLINE. The field qualifier (LA) must be used. Most AVLINE items are English language.

FRE (LA)

ENG (LA)

9.5.36 LANGUAGE OF SUMMARIES (LS)

Language of Summaries field indicates if the item cataloged contains summaries in the original and other languages. If summaries are provided in four or more languages, MUL for Multiple Languages is used. However, if English is one of the summary languages, the field always contains ENG.

9.5.37 OPEN/CLOSED INDICATOR (OC)

For serials, the open/closed indicator signifies whether the serial is still open and continuing or has ceased and is closed. It is searchable as 0 for open or C for closed.

9.5.38 MAIN ENTRY TYPE (MT)

The Main Entry Type indicates which element is the Main Entry for the cataloged item. The first occurrence of the field named will always be the Main Entry.

PERSONAL NAME MAIN ENTRY. . . The first occurrence of the PN field is the Main Entry.

CORPORATE NAME MAIN ENTRY. . . The first occurrence of the CN field is the Main Entry.

TITLE MAIN ENTRY . . . The first occurrence of the TI field is the Main Entry.

9.5.39 RECORD SOURCE (RS)

The Record Source is a field for internal control of the cataloging record as it is processed. It indicates the origin of the record. While it is printable and searchable, the data has no significance except for internal NLM processing.

9.5.40 DATE OF ENTRY (DA) (Rangeable)

The Date of Entry is directly searchable in the Index, rangeable, and printable. It represents the day that the citation was entered into AVLINES and should not be confused with the publication date of the item itself. Date of entry is carried as a six digit number in the format: YYMMDD, where Y equals year, M equals month, and D equals day. May 9, 1973 would be input as 730509. Qualify when searching to avoid a multimeaning message with the LR and MR fields.

The date of entry may be searched alone to obtain the number of citations input to the file on any specific month or day, or to determine the latest date the file was updated. It may also be combined with any searchable element to restrict the search to a particular time period or to update an earlier search.

The truncation symbol (:) is used to obtain citations entered into the file during an entire month or year. A multimeaning message will probably be obtained if citations were entered on more than one day in any month. If the truncated data is preceded by the word ALL, the multimeaning message will be avoided. For example:

SS 1 /C?
USER:
7708: (DA)
PROG:
MM (7708:) (5)

1 770803 (DA)
2 770809 (DA)
3 770817 (DA)
4 770824 (DA)
5 770831 (DA)

Entry date searched alone to find total citations input for a particular month.

SPECIFY NUMBERS, ALL, OR, NONE-

USER:
ALL
PROG:
SS (1) PSTG (641)

* * * * *

SS 1 /C?
USER:
ALL 7708: (DA)
PROG:
SS (1) PSTG (641)

If ALL is used, program gives postings immediately without the multimeaning message.

* * * * *

SS 1 /C?
USER:
MOTION PICTURE AND ALL 7708: (DA)
PROG:
SS (1) PSTG (63)

Entry date combined with another searchable element.

* * * * *

SS 1 /C?
USER:
MOTION PICTURE AND ALL 7708: (DA)
PROG:
SS (1) PSTG (63)

When updating a search for more than one month or day, each date is combined with the search strategy.

SS 2 /C?
USER:
MOTION PICTURE AND ALL 7707: (DA)
PROG:
SS (2) PSTG (2)

9.5.41 DATE OF LAST MAJOR REVISION (MR) (Rangeable)

In the format YYMMDD (YearMonthDay), this date field indicates a major revision made by NLM catalogers to primary bibliographic elements or the Review Data (RD) field of the record. Qualify when searching this field to avoid confusion with the DA and LR fields.

9.5.42 DATE OF LAST REVISION (LR) (Rangeable)

In the format YYMMDD (YearMonthDay), this date field is automatically generated whenever a citation is file maintained or changed in any way. Qualify when searching this field to avoid confusion with the DA and MR fields.

9.5.43 REVISION INDICATOR (RI)

If changes to a citation are significant enough to warrant republication of the cataloging in the next regular cumulation of the NLM Audiovisuals Catalog, the Revision Indicator (RI) field will contain the term REV, or REV.CIP as applicable. It is directly searchable and printable.

9.5.44 ITEM TYPE (IT)

Item Type (IT) is indicated by a one-letter code listed in the table below. Except for M, these codes are directly searchable and should be qualified by (IT) for searching. The entire word(s), however, now appears when PRINT commands are used. To find monographs, search all of the other types first, then use the AND NOT operator to retrieve what is left, i.e., the monographs.

IT - Item Type

M for Monograph
S for Serial
Z for Monographic Series
B for Book in Parts

9.5.45 RUN TIME (RT) (Rangeable)

The run time in minutes is directly searchable and rangeable. The run time is entered as a three-digit numeric. It is also carried in the Collation (CO) field. See PART 4 for ranging instructions.

For 10 minute AVs and 60 minute AVs:

Search AVLINE Using

010(RT)

060(RT)

AVLINE Printout

CO - 1 cassette, 10 min. : sd.,
col. ; 3/4 in.
RT - 010

CO - 39 slides : col. ; 2x2 in
& 2 cassettes (2-track.
mono. 60 min.)
RT - 060

9.5.46 REVIEW DATE (RE)

The Review Date of the item is a directly searchable element. The date is entered as a four-digit numeric in the form, YYMM where Y stands for the year and M for the month. For example, 7404 for April, 1974.

The General Note (GN) field also carries the review date in the print form:

Review date: Apr. 1974.

9.5.47 REVIEW DATA (RD)

All Review Data displayed in the General Notes (GN) field in a print format is carried for searching in the (RD) field. The following lists indicate the values which may be entered for searching:

Ratings

HIGHLY RECOMMENDED - titles which have been reviewed and highly recommended and which have all review data and an abstract.

RECOMMENDED - titles which have been reviewed and recommended, and which have all review data and a critical abstract.

NOT RECOMMENDED - titles which have been reviewed and not recommended. These also have review data and a critical abstract explaining the rating, but MeSH headings are not included. They appear only in AVLINE and not in the printed publications.

NO REVIEW - Category A, educationally designed titles which AAMC has chosen not to have reviewed. These may contain some elements in the RD field such as audience level, and may have a producer-supplied abstract.

PENDING - Category A, educationally designed titles which are pending review. These records, which appear only in AVLINE until their transfer to either RECOMMENDED or NOT RECOMMENDED, are bibliographic records only, with no review data or abstract.

NONE - Category B, lecture type titles which do not go through review and are bibliographic records only with no abstract.

CIP - Cataloging in publication status.

Audience Levels

Undergraduate	Medical
Graduate	Dental
Continuing Education	Nursing
Specialty	Allied Health
General	Ph.D.
Non-degree/Technical	Advance Certificate

Specialties

Any specialties listed have been entered using the appropriate MeSH term. See Appendix C for a list of specialties used in AVLINe.

Learning Method

Lecture Support (pre-1979 Review Date); Support (1979 Review Date forward)

Self Instructional

Pre-Test

Post-Test

CE Credit

Review Body

The AVLINe review process takes place under the auspices of the Association of American Medical Colleges, sometimes in conjunction with other organizations. Searching tags have been created for the responsible review bodies.

In the current review mode, all tags begin with AAMC as follows:

AAMC (Association of American Medical Colleges)

AAMC/ACEP (in conjunction with the American College of Emergency Physicians)

AAMC/ASCP (in conjunction with the American Society of Clinical Pathologists)

AAMC/APS (in conjunction with the American Physiological Society)

AAMC/AGA (in conjunction with the American Gastroenterological Association)

Others will be added as necessary.

In the past, some of the above organizations were given full review responsibility. They can be searched directly as follows:

AADS (American Association of Dental Schools)

APS (American Physiological Society)

ASCP (American Society of Clinical Pathologists)

NLM (National Library of Medicine)

NMAC (National Medical Audiovisual Center)

EXAMPLES:

SS 1 /C?

USER:

AAMC/ASCP (RD)

PROG:

SS (1) PSTG (5)

SS 1 /C?

USER:

ALL AAMC: (RD)

PROG:

SS (1) PSTG (3068)

9.5.47.1 SEARCHING IMPLICATIONS OF CATEGORY A AND CATEGORY B

The categorization of AVLINe material into Category A (educationally designed programs) and Category B (programs representing documentation of educational events) allows retrieval to be limited to either of these two types of programs.

Searches can be limited to reviewed Category A items by restricting retrieval to only those citations with the terms "RECOMMENDED" or "HIGHLY RECOMMENDED" in the Review Data (RD) field.

EXAMPLE:

SS 1 /C?

USER:

(RD) RECOMMENDED OR HIGHLY RECOMMENDED

PROG:

SS (1) PSTG (3995)

SS 2 /C?

USER:

CORONARY DISEASE AND 1

PROG:

SS (2) PSTG (23)

When limiting to citations with the tag NOT RECOMMENDED in the Review Data (RD) field, the word NOT must be disguised so that it won't be interpreted as a Boolean operator.

EXAMPLES:

SS 2 /C?

USER:

NOT RECOMMENDED (RD)

PROG:

SS (2) PSTG (2395)

SS 3 /C?

USER:

PRT TI

PROG:

CANNOT PRINT SS: NO POSITIVE TERM WAS ANDED WITH NEGATED TERM.

SS 3 /C?

USER:

NO# RECOMMENDED (RD)

PROG:

SS (3) PSTG (156)

SS 4 /C?

USER:

LIVER NEOPLASMS

PROG:

SS (4) PSTG (7)

False drops

SS 5 /C?

USER:

4 AND NOT RECOMMENDED

PROG:

SS (5) PSTG (3)

Correct

SS 6 /C?
USER:
4 AND N#T RECOMMENDED
PROG:
*NONE-

Searches can be limited to Category B items by restricting retrieval to only those items with the term "NONE" in the Review Data (RD) field. EXAMPLE:

SS 1 /C?
USER:
CORONARY DISEASE AND NONE (RD)

9.5.48 PHYSICAL DESCRIPTION (PH)

The following values may be entered for limiting searches to specific physical characteristics:

SOUND	1 IN	Super 8 MM
SILENT	2 IN	8 MM
BLACK AND WHITE	4X5 IN	16 MM
2X2 IN	5X7 IN	1-7/8 IPS
1/2 IN	8X10 IN	3-3/4 IPS
1/4 IN	10X10 IN	7-1/2 IPS

9.5.49 MEDIA (ME)

The media type is searchable using the terms listed. The media type is synonymous with the media designator used in the Body of the Entry.

FILMSTRIP	MOTION PICTURE
KIT	SLIDE
MICROFICHE	SOUND RECORDING
MICROFILM	TRANSPARENCY
MODEL	VIDEORECORDING

9.5.50 AVPROC CITATION NUMBER (AV)

The AVPROC Citation Number is carried for NLM use in the processing cycle. It is directly searchable.

9.5.51 CITATION NUMBER (NO)

The Citation Number is a sequential number assigned as citations are processed for AVLINE. The number is directly searchable.

9.6 TEXT WORD SEARCHING CAPABILITY (TW)

The following AVLINE fields are available for Text Word Searching:

CN	Corporate Name
CS	Corporate Name as Subject
SE	Series Titles
PE	Personal Name Series Titles
CE	Corporate Name Series Titles
AB	Abstract
TI	Title

Text Word searching may be used in conjunction with index searching of elements as a special individual feature. Always use the (TW) qualifier when you are Text Word searching.

9.7 AVLINE PRINT COMMANDS

There are five standard PRINT commands in AVLINE. They are listed below with their abbreviations and the data elements which will be displayed with each.

1) PRINT or PRT

PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject
TI - Title(s)
SE - Series Titles
PE - Personal Name/Series Titles
CE - Corporate Name/Series Titles
CA - Call Number and Library Symbol

TC - Title Continuation
AS - Authorship Statement
ED - Edition
IM - Imprint
CO - Collation
FL - First/Last Issue
MT - Main Entry Type
NO - Citation Number
IT - Item Type
DA - Date of Entry

2) PRINT FULL or PRT FU

MH - Main Heading Descriptor
PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject
TI - Title(s)
TC - Title Continuation
AS - Authorship Statement
ST - Title as Subject
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name/Series Title
CE - Corporate Name/Series Title
GN - General Notes
BI - Bibliography Note
CT - Content Note
DT - Dissertation Note

HN - History Note
LN - "Limited Use" Note
BW - Bound With Note
CA - Call Number and Library Symbol
DO - Dashed-on-Entry
PC - Procurement Source
PR - Price
LC - LC Card Number
FL - First/Last Issue
MT - Main Entry Type
DA - Date of Entry
NO - Citation Number
RS - Record Source
AV - AVPROC Citation Number
IT - Item Type
CP - Country of Publication
ED - Edition
MR - Date of Last Major Revision
LR - Date of Last Revision

3) PRINT DETAILED or PRT DL

MH - Main Heading Descriptor
CP - Country of Publication
PP - Country (Place) of Publication
Tree Number
PN - Personal Name
CN - Corporate or Conference Name
PS - Personal Name as Subject
CS - Corporate Name as Subject

CT - Content Note
DT - Dissertation Note
AB - Abstract
HN - History Note
LN - "Limited Use" Note
BW - Bound With Note
CA - Call Number and Library Symbol
HO - Holdings

TI - Title(s)
TC - Title Continuation
AS - Authorship Statement
ST - Title as Subject
ED - Edition
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name/Series Title
CE - Corporate Name/Series Title
BI - Bibliography Note
DA - Entry Date
MR - Date of Last Major Revision
LR - Date of Last Revision
RI - Revision Indicator
IT - Item Type

SL - Shelving Location
DO - Dashed-on-Entry
PC - Procurement Statement
YR - Year of Publication
PR - Price
LC - LC Card Number
LA - Language
LS - Language of Summaries
FL - First/Last Issue
MT - Main Entry Type
OC - Open/Closed Indicator
RS - Record Source
ME - Media
NO - Citation Number
AV - AVPROC Citation Number

4) PRINT SUMMARY or PRT SU

TI - Title(s)
TC - Title Continuation
AS - Authorship Statement
ED - Edition
IM - Imprint
CO - Collation

SE - Series Title
PE - Personal Name/Series Title
CE - Corporate Name/Series Title
AB - Abstract
NO - Citation Number

5) PRINT LOAN or PRT LOAN

TI - Title(s)
TC - Title Continuation
AS - Authorship Statement
ED - Edition
IM - Imprint
CO - Collation
SE - Series Title
PE - Personal Name/Series Title

CE - Corporate Name/Series Title
PC - Procurement Source
PR - Price
FL - First/Last Issue
IT - Item Type
CA - Call Number and Library Symbol
NO - Citation Number

All AVLINE PRINT commands will display 25 lines plus the number of lines needed to complete the record being printed at the 25th line, unless you explicitly ask for fewer records. The first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified may be displayed by answering YES to each CONTINUE PRINTING? (YES/NO) message.

Tailored PRINT commands, including the OFFLINE print option, may be constructed to meet a non-standard printing requirement.

The AVLINE data base can also be searched in the OFFSEARCH and STORESEARCH mode. See PART 5 for further explanations.

For those elements which are rangeable, see instructions in PART 4 of this manual.

AVLINE
APPENDIX A

9.8 AVLINE FORM SUBHEADINGS

The National Library of Medicine uses Medical Subject Headings as the authoritative source for cataloging audiovisuals added to the collection. For AVLINE, MeSH is modified by the use of form subheadings which are searched separately. For example:

LANGUAGE DISORDERS AND AUDIOCASSETTES (SH) AND PERIODICALS (SH)
will retrieve an audiocassette periodical on the subject of language disorders.

AUDIOCASSETTES
AUDIOCASSETTES - ABSTRACTS
AUDIOCASSETTES - PERIODICALS
AUDIOTAPES
AUDIOVISUAL KITS
CONGRESSES
FILMSTRIPS
MICROFICHE
MICROSCOPIC SLIDES
MOTION PICTURE LOOPS
MOTION PICTURES
PROGRAMMED TEXTS
SLIDES
TRANSPARENCIES
VIDEOCASSETTES
VIDEOCASSETTES - PERIODICALS
VIDEOTAPES

The above subheadings are those currently in use for AVLINE. For a complete list of legal form subheadings see the CATLINE chapter, Appendix A (8.8).

AVLINE
APPENDIX B

9.9 MEDIA CODES

The codes below reflect the physical item which NLM could own and would eventually shelve. This is particularly important in terms of our collection since often NLM will catalog a motion picture, but will have authorization to duplicate the item into videocassette format. In these cases, the medium designator in the title continuation field (TC) represents the media of the cataloged item available for loan or sale and the media code in the call number field (CA) represents the media type which NLM holds in its collection.

These media codes were designed to serve NLM shelflisting purposes and may or may not be useful to the field as a whole.

AC	Audiocassette
AT	Audiotape
CH	Chart
CA	Computer-aided-instruction
DC	Disc
DI	Diorama
FC	Filmstrip/cassette
FD	Filmstrip/disc
FL	Filmslip
FS	Filmstrip
FT	Filmstrip/tape
GA	Game
HA	Flashcards
KT	Kit
MF	Microfiche
MI	Microfilm
MO	Models
MP8	Motion Picture (8 mm.)
MPs8	Motion Picture (super 8 mm.)
MP16	Motion Picture (16 mm.)
PI	Picture
PT	Programmed Text
RA	Realia
SC	Slide/cassette
SL	Slides
SM	Microscope Slides
SS	Steroscope Slides
ST	Slide/Tape
TR	Transparency
VC	Videocassette
VS	Videocassette/slide
VT1/4	Videotape (1/4")
VT1/2	Videotape (1/2")
VT3/4	Videotape (3/4")
VT1	Videotape (1")
VT2	Videotape (2")

AVLINE
APPENDIX C

9.10 SPECIALTIES LISTED BY BROAD DISCIPLINES

Basic Sciences (Not a MeSH Term)

ANATOMY

ANATOMY, REGIONAL

ANATOMY, VETERINARY

CYTOLGY

EMBRYOLOGY

HISTOLOGY

NEUROANATOMY

BEHAVIORAL SCIENCES

ANTHROPOLOGY

PSYCHOLOGY

SOCIOLOGY

BIOCHEMISTRY

BIOLOGY

BOTANY

ECOLOGY

GENETICS

MICROBIOLOGY

BACTERIOLOGY

MYCOLOGY

VIROLOGY

PARASITOLOGY

ZOOLOGY

BIOPHYSICS

PHARMACOLOGY

PHYSIOLOGY

ENDOCRINOLOGY

NEUROPHYSIOLOGY

Medicine

AUDIOLOGY

AVIATION MEDICINE

COMMUNITY MEDICINE

EMERGENCY MEDICINE

EPIDEMIOLOGY

GERIATRICS

MILITARY MEDICINE

NUCLEAR MEDICINE

SOCIAL MEDICINE

SPECIALTIES, MEDICAL

ANESTHESIOLOGY

DERMATOLOGY

FORENSIC MEDICINE

GENERAL PRACTICE

FAMILY PRACTICE

GYNECOLOGY

INTERNAL MEDICINE

CARDIOLOGY

ENDOCRINOLOGY

GASTROENTEROLOGY

HEMATOLOGY

IMMUNOLOGY

NEUROLOGY

OBSTETRICS

OPHTHALMOLOGY

OTORHINOLARYNGOLOGY

PATHOLOGY

PATHOLOGY, SURGICAL

PEDIATRICS

NEONATOLOGY

PERINATOLOGY

PHYSICAL MEDICINE

REHABILITATION

PREVENTIVE MEDICINE

INDUSTRIAL MEDICINE

PUBLIC HEALTH

PSYCHIATRY

ADOLESCENT PSYCHIATRY

CHILD PSYCHIATRY

GERIATRIC PSYCHIATRY

PSYCHIATRY, COMMUNITY

PSYCHIATRY, MILITARY

RADIOLOGY

SCHOOL HEALTH

SURGERY

HEART SURGERY

NEUROSURGERY

ORTHOPEDICS

PROCTOLOGY

SURGERY, PLASTIC

UROLOGY

VASCULAR SURGERY

SPORT MEDICINE

TROPICAL MEDICINE

Dentistry

AVIATION DENTISTRY

FORENSIC DENTISTRY

GENERAL PRACTICE, DENTAL

GERIATRIC DENTISTRY

INDUSTRIAL DENTISTRY

MILITARY DENTISTRY

PREVENTIVE DENTISTRY
SCHOOL DENTISTRY
SE CIALTIES, DENTAL
ENDODONTICS
ORTHODONTICS
PATHOLOGY, ORAL
PE DODONTICS
PE RIODONTICS
PROSTHODONTICS
PUBLIC HEALTH DENTISTRY
COMMUNITY DENTISTRY
SURGERY, ORAL

HEALTH RE LATED (Not a MeSH Term)
BIOMEDICAL ENGINEERING
ENVIRONMENTAL HEALTH
HOSPITAL ADMINISTRATION
HOUSEKEEPING
INFORMATION SERVICES
JURISPRUDENCE
MAINTENANCE
ME DICAL RECORD ADMINISTRATORS
ME DICAL SECRETARIES
OPTOMETRY
ORTHOPTICS
OSTEOPATHY
PHARMACY
PODIATRY
SOCIAL WORK
VE TERINARY MEDICINE
VO LUNTARY WORKERS

NURSING

GERIATRIC NURSING
HOME NURSING
INDUSTRIAL NURSING
MIDLWIFERY
MILITARY NURSING
NURSE ANESTHETISTS
NURSE CLINICIANS
NURSE PRACTITIONERS
NURSING, PRACTICAL
OBSTETRICAL NURSING
OPERATING ROOM NURSING
PE DIA^TRIC NURSING
PSYCHIATRIC NURSING
PUBLIC HEALTH NURSING
SC HOOL NURSING
SURGICAL NURSING

ALLIED HEALTH (Not a MeSH Term)

DENTAL ASSISTANTS
DENTAL HYGIENISTS
DENTAL TECHNICIANS
DIE TETICS
NURSES' AIDS
PSYCHIATRIC AIDES
NUTRITION
OCUPATIONAL THERAPY
OPERATING ROOM TECHNICIANS
PHARMACISTS' AIDES
PHYSICIANS' ASSISTANTS
PHYSICAL THERAPY
SPEECH THERAPY
TECHNOLOGY, DENTAL
TECHNOLOGY, MEDICAL
SEROLOGY
TECHNOLOGY, RADIOLOGIC

PART 10
NAME AUTHORITY FILE

10.1 INTRODUCTION

The Name Authority File (NAF) contains Authority records for all corporate, conference and series names used in NLM's descriptive cataloging. All personal names requiring any cross references or personal names used more than once are also recorded in this file. The NAF contains two basic types of records: 72,000 name records and 14,000 series decision records; the file is updated twice weekly. This data base is available primarily for use in the cataloging process.

10.2 ENTERING THE NAME AUTHORITY FILE

To access the NAME AUTHORITY FILE, enter the command "FILE NAME or "FILE NAME AUTHORITY after logging in to ELHILL 3 at NLM.

10.3 NAME AUTHORITY UNIT RECORD

The table below lists all the data elements in a name record and indicates the two-letter Search and Print qualifiers. The table also indicates which elements are directly searchable and which elements will display on each standard "PRINT" command. For elements in the series records, see The Series Decision Unit Record described after information on The Name Records.

The NAME AUTHORITY Unit Record

NAME OF ELEMENT	SEARCHABLE	SEARCH QUALIFIER	PRINT QUALIFIER	"PRT DETAILED	"PRT	"PRT FULL
Name Print Version+	*	NA	NA	X	X	X
Name Date			ND	X	X	X
Honorific			HO	X	X	X
Name Type	*	NT	NT	X		X
Name Form			NF	X		X
Name Entry Version	*		NE	X	X	X
Name Sort Version			NS	X		X
Backward Xref (See & See also Print & Entry Versions)	*	BX	BX	X		X
Backward Xref Type	*	BT				
Note			NO	X		X
History Notes			HN	X		X
Distribution Note			DN	X		X
Source of Authority			AS	X		X
Address			AD	X		X
Record Source			RS	X		X
Entry Date (Rangeable)	*	DA	DA	X	X	X
Citation Number	*	CN	CN	X	X	X
Date of Last Revision	*	LR	LR	X		X
+Text Word Searchable						

NOTE: "PRT FULL is equivalent to "PRT DETAILED in this unit record.

Two sample unit records resulting from a "PRINT FULL command from the NAME AUTHORITY File are displayed below:

1

NA - PARACELSUS
ND - 1493-1541
NE - PARACELSUS/1493
NT - PERSONAL NAME
NF - FORENAME ONLY
BX - BOMBASTUS AB HOHENHEIM, THEOPHRASTUS:4
BX - HOHENHEIM, THEOPHRASTUS VON:4
BX - THEOPHRASTUS VON HOHENHEIM:4
AS - PARACELSUS IN SELBSTZEUGNISSEN UND BILDDOKUMENTEN. 1969
RS - O:MED
RS - C:MED
RS - M:SKS
DA - 741223
LR - 750926
CN - 75011636

2

NA - FISHER SCIENTIFIC COMPANY. ADVERTISING DEPT.
NE - FISH/SCAD
NT - CORPORATE NAME
NT - PROCUREMENT SOURCE
NF - NAME (DIRECT ORDER)
AS - 28 GRAMS OF PREVENTION: SAFETY FOR TODAY'S LABORATORIES.
[MOTION PICTURE] 1975.
AD - 11 FORBES AVENUE
AD - PITTSBURGH, PA 15219
AD - 412-562-8300
RS - O:AEJ
RS - C:AJB
DA - 770620
CN - 77003343

10.3.1 NAME PRINT VERSION (NA)

The printed form of the name as it is to appear in NLM's Current Catalog is displayed in this field. Internal punctuation is exact. Terminal punctuation, however, has been omitted since the publication process provides this punctuation. The Name Print Version is directly searchable through the first 36 characters.

Use the following algorithm to search Personal Names in the NAF:

1. Last Name
2. Comma
3. First Initial
4. Colon

The name may have been established differently from the way it appears in a bibliography or on the title page.

Name: Anderson, Robert Charles

Search: Anderson, R:

Corporate names may be searched in the format that would conform to AACR:

National Library of Medicine

If a subdivision may follow, a colon may be input after the name to retrieve all subordinate bodies of the name.

All corporate names can be searched by inputting a text word from the name, followed by (TW). For long names or ones not unique in the first 36 characters, this is a fast and more precise method of searching.

USER:

U. S. DEPT. OF HEALTH: (NA)

PROG:

SS (5) PSTG (47)

SS 6/C?

USER:

5 AND TASK (TW) AND FORCE (TW)

PROG:

SS (6) PSTG (3)

SS 7/C?

USER:

"PRINT NA 1

PROG:

1

NA - U. S. DEPT. OF HEALTH, EDUCATION, AND WELFARE. SECRETARY'S
TASK FORCE ON THE COMPENSATION OF INJURED RESEARCH SUBJECTS

10.3.2 NAME DATE (ND)

If a personal name has a birthdate or birth and death dates established for that name, the date(s) is (are) displayed in this field. Name Date is printable but not searchable.

10.3.3 HONORIFIC (HO)

If a personal name has a descriptive term of honor connected with the name, such as Lady, Sir, Bart., etc., the honorific is displayed in this field. It is printable but not searchable. Honorifics display in a single string after the name:

Osler, William, Sir, bart. [NLM Current Catalog]

NA - Osler, William

HO - Sir, bart.

10.3.4 NAME TYPE (NT)

The type of name established will be represented as indicated in the table below and is searchable by using the coded letters below, followed by (NT).

P for Personal Name
C for Corporate Name
F for Conference Name
U for Uniform Title

D for Producer
B for Publisher
S for Procurement Source

10.3.5 NAME FORM (NF)

The form of the name is indicated by one of the following terms:

Personal Names:

Forename Only

Single Surname

Multiple Surname

Name of Family

Non-Personal Names:

Surname

Place or Place and Name

Name (direct order)

10.3.6 NAME ENTRY VERSION (NE)

Entry versions for names have been developed for use in the processing of cataloging records. The following general rules apply to Entry Versions in the NAF:

- a) Entry Versions always contain one and only one slash (/).
- b) Entry Versions are always developed from the Name Print Version and Name Date (only for personal names that have dates). All corporate names have Entry Versions.

The rules for Entry Versions for specific name types are listed below:

- a) Personal Names with Name Dates

Use the following algorithm:

Surname Slash First and Second Initial Birth Year

Examples:

Name in Current Catalog:

Burke, John Gordon, 1938-

Murray, Robert, 1934-

Osler, William, Sir, bart., 1849-1919

De Robertis, Eduardo D. P., 1931-

Entry Version:

BURKE/JG1938

MURRAY/R1934

OSLER/W1849

DEROBERTIS/ED1931

b) All Corporate Names

Use the following algorithm:

First 4 Letters of First Word Slash First Letter of Every Succeeding Word

Examples:

Name in Current Catalog:

National Library of Medicine

National Library of Medicine.

Technical Services Division

Grady Memorial Hospital, Atlanta

Entry Version:

NATI/LOM

NATI/LOMTSD

GRAD/MHA

Exceptions to the above rules are U.S. and Gt. Brit. For names beginning with U.S. use U.S. as the first four letters. For names beginning with Gt. Brit. use GTBR as the first four letters:

Name in Current Catalog:

U. S. Congress. Senate

Gt. Brit. Ministry of Health

Entry Version:

U.S./CS

GTBR/MOH

c) All Conference Names

Use the same algorithm as corporate names EXCEPT include all Arabic numbers used to specify the number of the conference and the year.

Examples:

Name in Current Catalog:

World Congress on the Ear, 1st, London, 1962

World Congress on the Ear, 10th, London, 1972

Entry Version:

WORL/COTE1L1962

WORL/COTE10L1972

Generally, whenever any corporate name contains numerals which need to be differentiated, include the entire number in the Entry Version, not just the first digit of the string.

These Entry Versions may be used for direct searching of the name. Often, using the Entry Version is quicker and more direct than the print version of the name. If the print version is not unique within the first 36 characters, you will receive a Multi-Meaning message. For example, if the search is for the U.S. Congress. Senate. Committee on Finance. Subcommittee on Health, using the truncated print version will result in a Multi-meaning message:

SS 1 /C?

USER:

U. S. CONGRESS. SENATE. COMMITTEE:

PROG:

MM (U. S. CONGRESS. SENATE. COMMITTEE:) (22)

ALL OR NONE?

USER:

By using the Entry Version, only one posting results:

SS 2 /C?
USER:
U.S./CSCOFSOH

PROG:
SS (2) PSTG (1)

SS 3 /C?
USER:
"PRINT NA

PROG:
NA - U. S. CONGRESS. SENATE. COMMITTEE ON FINANCE. SUBCOMMITTEE
ON HEALTH

When you enter an Entry Version for searching, it is advisable to add two hash marks (##) to the string. Some entry versions were not unique. Therefore, numerics were added to differentiate the duplicate entry versions. Since you do not know if this was done, use the # marks. Do not use (:) Truncation Symbol because you will get more subdivisions of the main name than desired.

SS 4 /C?
USER:

INTE/CA##

PROG:
MM (INTE/CA##) (7)

- 1 INTE/CA.1 (NA)
- 2 INTE/CA.2 (NA)
- 3 INTE/CA.3 (NA)
- 4 INTE/CA.4 (NA)
- 5 INTE/CAC (NA)
- 6 INTE/CANC (NA)
- 7 INTE/CAT (NA)

SPECIFY NUMBERS, ALL, OR, NONE-
USER:

1,2,3,4

PROG:
SS (4) PSTG (4)

SS 5 /C?
USER:

"PRT NA

PROG:
NA - INTERNATIONAL CLAIM ASSOCIATION

NA - INTERNATIONAL COMMUNICATION ASSOCIATION

NA - INTERNATIONAL CHIROPRACTORS ASSOCIATION

NA - INTERDISCIPLINARY COMMUNICATION ASSOCIATES

10.3.7 NAME SORT VERSION (NS)

If the computer generated sort for this name will not place it in proper filing sequence, a cataloger-assigned sort version is displayed in this field. This is a printable field only.

10.3.8 BACKWARD XREF (BX)

See references and See also References

All cross references established for a name are carried in the Backward Cross Reference (BX) field. Numeric codes, which appear at the end of the reference, have been used to indicate the type of cross reference.

0 attached to a reference indicates that the cross reference is a "see" reference that will NOT be printed in Current Catalog.

4 attached to a reference indicates that the cross reference is a "see" reference that WILL be printed in Current Catalog.

5 attached to a reference indicates that the cross reference is a "see also" reference.

6 attached to a reference indicates that the cross reference is a "see" reference in the American Library Association (ALA) form of the name.

10.3.9 BACKWARD XREF TYPE (BT)

Cross references may be searched by type by inputting the numbered codes above, followed by (BT).

10.3.10 NOTE (NO)

Processing notes which may be pertinent regarding the name are displayed in this field. Please be aware that a number of these notes may be required for NLM's cataloging procedures and may not be pertinent for your use. This field is printable only.

10.3.11 HISTORY NOTES (HN)

Notes which delineate the history of the name are displayed in this field. These notes justify the linking entries in the (BX) field.

10.3.12 DISTRIBUTION NOTE (DN)

Notes regarding the distribution sources of audiovisuals are displayed in this field. This field is used only for those names involved in audiovisuals cataloging.

10.3.13 SOURCE OF AUTHORITY (AS)

The Source of Authority indicates the author and/or title of the piece from which the name was established. It is a printable field only.

10.3.14 ADDRESS (AD)

If an address is known for a Producer or Procurement Source, it is noted in this field. Only addresses used in conjunction with the AVLNE data base have been established.

10.3.15 RECORD SOURCE (RS)

The initials of the cataloger originating the authority record are displayed after the 0: and the initials of the corrector or revisor are displayed after the C: All records originally derived through a computer conversion program are designated with 0:MED, C:MED in the RS field.

10.3.16 ENTRY DATE (DA)

The date of release to the Name Authority File for each record is displayed in this field in the form YYMMDD.

Y for year; M for month; D for day

Example: 750415

This is a rangeable element.

10.3.17 CITATION NUMBER (CN)

This is an 8 digit unique number assigned to each record. It is searchable.

10.3.18 DATE OF LAST REVISION (LR)

This field contains the date the name was revised in the form YYMMDD.

10.4 SERIES DECISION UNIT RECORD

The table below lists all the data elements in a series decision record and indicates the two-letter print and search qualifiers. The table also indicates which elements are directly searchable and which elements will display on any standard PRINT command.

The SERIES DECISION Unit Record

<u>NAME OF ELEMENT</u>	<u>SEARCHABLE</u>	<u>SEARCH QUALIFIER</u>	<u>PRINT QUALIFIER</u>	<u>"PRT DETAILED</u>	<u>"PRT</u>	<u>"PRT FULL</u>
Series Title						
Print Version+	X	SE	SE	X	X	X
Series Type	X	ST	ST	X		X
Series Treatment Code	X	SC	SC	X	X	X
Series Sort Version			SV	X		X
Series Entry Version	X	EV	EV	X	X	X
Series Title Search Key			SK	X		X
Backward Xref	X	BX	BX	X		X
(see & See also Print & Entry Versions)						
Backward Xref Type	X	BT				
Note			NO	X		X
History Notes			HN	X		X
Source of Authority			AS	X		X
Record Source			RS	X		X
Entry Date	X	DA	DA	X		X
Citation Number	X	CN	CN	X	X	X
Date of Last Revision	X	LR	LR	X		X

+Text Word Searchable

NOTE: "PRT FULL is equivalent to "PRT DETAILED in this unit record.

Below are examples of "PRT FULL from the Series Decision Records.

1
 SE - EXCERPTA MEDICA : INTERNATIONAL CONGRESS SERIES: NO.
 EV - EXCE/MICSN
 ST - TITLE
 SC - MADE CLASSED TOGETHER, ANALYZED
 BX - INTERNATIONAL CONGRESS SERIES:4:INTE/CS.2
 NO - USE DATE OF MEETING, NOT PUBLICATION DATE IN CALL NO. EACH NEW ISSUE IS
 PUT ON REF. REF. IS RESPONSIBLE FOR KEEPING ONLY LATEST ONE OF EACH
 CONGRESS. PIECE WILL BE MARKED FOR REF. BUT CARDS FOR ANAL. WILL NOT.
 AS - INTERNATIONAL CONGRESS ON MUSCLE DISEASES, 3D, NEWCASTLE UPON TYNE,
 1974. ABSTRACTS OF PAPERS PRESENTED. 1974.
 RS - O:SKS
 RS - C:SFS
 RS - M:SLG
 DA - 750421
 LR - 771008

1
 SE - VIDEO JOURNAL OF MEDICINE
 EV - VIDE/JOM
 ST - TITLE
 SC - MADE CLASSED SEPARATELY
 AS - CURRENT CONCEPTS IN DIABETIC MANAGEMENT. [VIDEORECORDING] 1976.
 RS - O:MLH
 RS - C:AJB
 RS - M:AJB

A - 771026
.R - 771026

The following is an explanation of each of the data elements in the Series Decision Record:

10.4.1 SERIES TITLE PRINT VERSION (SE)

The printed version of the series title as it is to appear in NLM's Current Catalog is displayed in this field. The Series Title is directly searchable up through the first 36 characters. The colon should be used when the full string is not input. The print version is text word searchable and is recommended instead of searching by print version because of high postings on many names.

10.4.2 SERIES TYPE (ST)

The type of series is indicated by a single alphabetic character or a decoded type from the table below:

T for Title

C for Corporate Author-Title

F for Conference Author-Title

P for Personal Author-Title

The Series Type is searchable using the single alphabetic, followed by (ST).

0.4.3 SERIES TREATMENT CODE (SC)

The treatment or decision on the series is indicated by a single numeric or decoded treatment using the table below:

1	for Made Classed Separately
2	for Made Classed Together
3	for Made Classed Together, Analyzed
4	for Made Classed Together, Partially Analyzed
5	for Made Classed Together, Supplements Analyzed
6	for Not Made, Use as Series Note
7	for Not Made, Use as Drop Note
8	for Ignore for Cataloging

This can be searched by inputting the number followed by (SC).

NOTE: "Made" refers to making an added entry for the title. "Analyzed" refers to cataloging all or part of the issues in a monographic series.

0.4.4 SERIES SORT VERSION (SV)

The computer-generated sort version does not sequence the title in the correct filing order, a cataloger-assigned sort is displayed in this field.

10.4.5 SERIES ENTRY VERSION (EV)

Use the same rules to generate a Series Entry Version as given for Corporate Names. Since the print version of the series title includes any specific volume or numbering indications, be sure to include the volume designator in the Entry Version. A colon can be used instead of the #.

<u>Series in Current Catalog</u>	<u>Entry Version</u>
Current topics in experimental endocrinology	CURR/TIEE##
Pastoral psychology series ; no.	PAST/PSN##
Acta Medica Scandinavica : Supplementum ;	ACTA/MSS##

EXCEPTION: For the DHEW publication series, include all letters in the parenthesis as part of the Entry Version. Examples:

<u>Series in Current Catalog</u>	<u>Entry Version</u>
DHEW publication no. ; (HRA)	DHEW/PNHRA##
DHEW publication no. ; (NINDS)	DHEW/PNNINDS
DHEW publication no. ; (NIH)	DHEW/PNNIH##

10.4.6 SERIES TITLE SEARCH KEY (SK)

Ignore this field since it is no longer used to develop a search key for CATLINE.

The following elements follow the same rules outlined in the section of the Name Records of the Name Authority File.

10.4.7 BACKWARD XREF (BX) See 10.3.8.

10.4.8 BACKWARD XREF TYPE (BT) See 10.3.9.

10.4.9 NOTE (NO) See 10.3.10.

10.4.10 HISTORY NOTES (HN) See 10.3.11.

10.4.11 SOURCE OF AUTHORITY (AS) See 10.3.13.

10.4.12 RECORD SOURCE (RS) See 10.3.15.

10.4.13 ENTRY DATE (DA) See 10.3.16.

10.4.14 CITATION NUMBER (CN) See 10.3.17.

10.4.15 DATE OF LAST REVISION (LR) See 10.3.18.

PART 11
SERLINE

11.1 INTRODUCTION

SERLINE (SERials-on-LINE) contains approximately 30,000 records representing all serials and numbered congresses which are on order, in process, or currently received at NLM. Ceased serials in the NLM collection are being added to the file gradually. Since CATLINE contains only records for titles cataloged since 1965, SERLINE contains many serial titles not found in the on-line catalog. Location symbols for approximately 120 resource libraries in the Regional Medical Library Network currently appear on about 6500 primary, substantive journals in the file. As of early 1978, SERLINE will assume the MEDLINE citation input and publication functions of the present Journal Authority File; the separate Journal Authority File will be removed from the network.

SERLINE is designed to support interlibrary loan and cooperative acquisitions activities throughout the Regional Medical Library Network by providing readily searchable bibliographic and location information for biomedical serials. The file can also be used to produce tailored listings of locally available serials in special subject areas or languages, of important titles held by very few libraries in a region, of important titles not held in a region, etc.

11.2 ENTERING THE SERLINE FILE

Authorized subscribers may access the SERLINE file by following NLM login procedures. To switch to SERLINE, users enter "FILE SERLINE".

11.3 SERLINE UNIT RECORD

The SERLINE unit record is the computer stored information representing one serial or numbered congress. The table below lists all the data elements:

SERLINE UNIT RECORD

NAME OF ELEMENT	SEARCH QUALIFIER	SEARCHABLE	WORD SEARCHABLE	"PRT DETAILED	"PRT FULL	"PRT	"PRT LOC	"PRT AC	"PRT INDEX
Title	TI	*	X	X	X	X	X	X	X
Title Search Key	TK	*	X	X	X	X	X	X	X
Title Abbreviation	TA	*	X	X	X	X		X	X
First/Last Issue	FL		X	X	X	X		X	
City of Publication	PL		X	X	X	X		X	X
Publisher	PU	*	X	X	X	X		X	
Country	CP	*	X	X	X	X		X	X
General Notes	GN		X	X	X	X		X	X

NAME OF ELEMENT	SEARCH QUALIFIER	SEARCHABLE	TEXT WORD SEARCHABLE	"PRT DETAILED	"PRT FULL	"PRT	"PRT LOC	"PRT AC	"PRT INDEX
Added Title	AT	*	X	X	X	X			X
Language	LA	*	X	X	X	X			X
Frequency	FR		X	X	X				
ISSN	IS	*	X	X	X	X			
CODEN	CD	*	X	X	X	X			X
Abstracting & Indexing Tags	AI	*	X	X	X	X			
Main Headings	MH	*	X	X	X	X			
CATLINE Citation Number	NO	*	X	X	X	X			
NLM Call Number	CA	*	X	X	X	X	X		
Region 1 Library Symbols	L1	*	X	X	X	X	X		
Region 2 Library Symbols	L2	*	X	X	X	X	X		
Region 3 Library Symbols	L3	*	X	X	X	X	X		
Region 4 Library Symbols	L4	*	X	X	X	X	X		
Region 5 Library Symbols	L5	*	X	X	X	X	X		
Region 6 Library Symbols	L6	*	X	X	X	X	X		
Region 7 Library Symbols	L7	*	X	X	X	X	X		
Region 8 Library Symbols	L8	*	X	X	X	X	X		
Region 9 Library Symbols	L9	*	X	X	X	X	X		
Region 10 Library Symbols	L10	*	X	X	X	X	X		
Region 11 Library Symbols	L11	*	X	X	X	X	X		
Region as a whole	RG	*							
Regional Location Counts	K1	*							
	to	K11							
Initial Year of Publication	YR	*	X		X				
Final Year of Publication	CL	*	X		X				
Open/Closed Indicator	OC	*	X		X				
SERLINE Citation	SQ	*	X		X		X		
Publisher's Address	AD	*	X		X				
Price	PR	*						X	
Gaps	GA	*			X				X
Out of Print Note	OP	*			X				
LJI Subject Headings	JD	*			X				X
Country Tree Number	PP	*			X				
Journal Title Code	JC	*			X				X
Journal Subset	SB	*			X				X
Special List Indicator	LI	*			X				X
Selectively Indexed Indicator	IX	*			X				X
Disallow Abstract Tag	AB	*			X				X
Date Established	ES	*			X				X
Indexing Note	IN	*			X				X
Indexing Priority	PY	*			X				X
Indexing Status	ST	*			X				X
Pulldate	LJ	*			X				X
Date of Last Major Revision	MR	*			X				

The following is a description of each of the data elements in the unit record:

11.3.1 TITLE (TI)

For all true serials, this element contains the main title as it appears on the piece.

JOURNAL OF THE AMERICAN DENTAL ASSOCIATION

NOT AMERICAN DENTAL ASSOCIATION. JOURNAL

Added Titles appear in a separate element (AT).

For numbered congresses which do not have overall titles, this element contains the name of the congress.

There are no diacritical marks, apostrophes, or ampersands in SERLINE. In German words, an umlaut causes the vowel it modifies to be followed by an E. Otherwise all diacritical marks are disregarded. Elided articles (such as d', l') are separated from the words they modify by a blank instead of an apostrophe. The possessive case S is added to the end of the word it modifies. Ampersands are translated to AND in the language of the title.

The Title and Added Title elements are both searchable through the Text Word (TW) capability and also by means of the Title Search Key (TK) described below. In general, the most efficient way of searching the Title and/or Added Title is through a combination of a Title Search Key and Text Word(s).

11.3.2 TITLE SEARCH KEY (TK)

The Title Search Key is composed of the following four elements:

- (1) the first three letters of the first significant word;
- (2) the first letter of the second word;
- (3) the first letter of the third word; and
- (4) the first letter of the fourth word.

These elements are separated by slashes (/). If the title contains fewer than four words, the title search key is shortened accordingly but it always ends with a letter, not a slash. Examples:

Title - Annual Survey of Psychoanalysis
Title Search Key - ANN/S/O/P

Title - Antibiotics
Title Search Key - ANT

Title - Annales d Oculistique
Title Search Key - ANN/D/O

Initial articles are disregarded, but internal articles, prepositions, and conjunctions are used to construct the Title Search Key. If the complete title is not known, the user should search by means of Text Words alone. Note that in SERLINE the Title Search Key is a separate printable element with its own qualifier. In CATLINE and AVLIN, the Title Search Key is part of the TI field and is not printable in Standard "PRINT commands.

11.3.2.1 SPECIAL CASES

If the first significant word of a title contains fewer than three letters, one blank is included in the title key after the first word. For example:

Title - In Vitro

Title Search Key - IN /V

Title - Y Hoc Viet-Nam

Title Search Key - Y /H/V/N or Y /H/V

For artificially hyphenated words (i.e., hyphenated words with component parts which might conceivably stand alone), two forms of title key have been provided. For example:

LIFE-THREATENING BEHAVIOR

LIF/T/B

LIF/B

Hyphenated words with elements which normally could not stand alone are treated as one word. For example:

ACTA SOCIA-MEDICA SCANDINAVICA

ACT/S/S

When in doubt, try both ways.

EXP (the abbreviation for EXPLODE), NOT, ALL, YES, and AND are always interpreted according to their special meanings in the general ELHILL search statement vocabulary. They must be disguised when they occur at the beginning of a search key in one of the two ways described below:

(1) The single variable character symbol (#) can be substituted for a letter of the first element of the Title Search Key. (For a further explanation of the Variable Character Symbol, see Part 3).

ALLERGIE UND ASTHMAFORSCHUNG

AL#/U/A

(2) The variable character symbol (#) can be used in place of the first slash of the Title Search Key.

ALLERGIE UND ASTHMAFORSCHUNG

ALL#U/A

EXPERIMENTAL BRAIN RESEARCH

EXP#B/R

In many cases searching exclusively with Title Search Key or Text Word(s) will result in the retrieval of multiple records. If a Title Search Key is ANDed with a Text Word from the title, the search will usually retrieve only one record. This is the best way to search for a specific title, if the complete title is known.

To retrieve Journal of the American Society for Preventive Dentistry:

JOU/0/T/A AND PREVENTIVE (TW)

PROG:
PSTG (1)

11.3.3 TITLE ABBREVIATION (TA)

Title abbreviations are assigned according to International Standard ISO-4-1972: Documentation - International Code for the Abbreviation of Titles of Periodicals. For all titles indexed in MEDLINE, the abbreviations in this element are the ones which appear in the MEDLINE citations. The abbreviation is directly searchable, so the user may find complete information on a serial cited in Index Medicus or MEDLINE by searching on the abbreviation from the citation.

JAMA (TA)

PROG:
PSTG (1)

11.3.4 FIRST/LAST ISSUE (FL)

This field contains the date and volume of the first issue for open serials and of the first and last issues for serials which have ceased publication or been continued or superseded by another title. This field is not directly searchable. (The initial year of publication (YR) and last year of publication (CL) are directly searchable.)

11.3.5 CITY OF PUBLICATION (PL)

The primary or first city in which the title is published is given in this data element. The state or country is added only to distinguish cities which are not unique, such as Cambridge, Massachusetts and Cambridge, England. City of Publication is not directly searchable.

11.3.6 PUBLISHER NAME (PU)

Government departments and agencies are preceded by the name of the country or state if some indication of place does not appear in the department or agency name itself. Names of universities precede specific academic departments.

The entire publisher's name is searchable through the Text Word capability (TW).

ELSEVIER (TW)

PROG:
PSTG (92)

11.3.7 COUNTRY OF PUBLICATION (CP)

The country of publication of the cataloged item is searchable using the place names in category Z of MeSH.

11.3.8 GENERAL NOTES (GN)

Previous and subsequent titles, sponsoring bodies, irregularities in numbering and similar kinds of information are given in this data element. Notes are not directly searchable.

11.3.9 ADDED TITLE (AT)

Cover titles, parallel titles, running titles, etc. are listed in the Added Title element. Added Titles are searchable through the Text Word capability and by means of the Title Search Key (TK).

11.3.10 LANGUAGE (LA)

Language(s) in which articles in the serial are written may be directly searched using the three-letter abbreviations listed in Appendix D to the CATLINE section of the manual. When searching languages, use the qualifier (LA) because the three-character abbreviations may match Title Search Keys (TK) for one-word titles or Journal Title Codes (JC).

11.3.11 FREQUENCY (FR)

The following codes are used for frequency:

A	= Annual	Q	= Quarterly
SA	= Semi-annual	I	= Irregular
M	= Monthly	BIEN	= Biennial
BM	= Bi-monthly	2Y	= 2/year
W	= Weekly	3Y	= 3/year
BW	= Bi-weekly	4Y	= 4/year

Frequency is not directly searchable.

11.3.12 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN is directly searchable. This is always a nine-character code consisting of four digits, a hyphen, and another four digits (the last character may be the letter X).

SS 1 /C?
USER:

0491-4481 (IS)

PROG:
PSTG (1)

SS 2 /C?
USER:

"PRINT TI

PROG:

TI - SUDAN MEDICAL JOURNAL

If available, ISSN should be included on interlibrary loan requests verified in SERLINE.

11.3.13 CODEN (CD)

CODEN is an international standard alphabetic code assigned to serial titles. SERLINE carries this code in its five-letter format for most substantive, primary journals. The sixth letter of the CODEN is a check digit and is not present in the file at this time.

11.3.14 ABSTRACTING AND INDEXING TAGS (AI)

Codes are listed on many primary, substantive journals if they are indexed in any of the indexing and abstracting publications listed below. In addition, the code EA has been added for non-English and non-Romance language journals if most of the articles have English abstracts. Abstracting and indexing tags in the data base are:

AIM	- <u>Abridged Index Medicus</u>
AV	- <u>Titles indexed for the upcoming index of Audiovisual Serials</u>
BA	- <u>Biological Abstracts</u>
CA	- <u>Chemical Abstracts</u>
EA	- <u>English Abstract</u>
EM	- <u>Excerpta Medica</u>
HLI	- <u>Hospital Literature Index</u>
IDL	- <u>Index to Dental Literature</u>
IM	- <u>Index Medicus</u>
INI	- <u>International Nursing Index</u>
PA	- <u>Psychological Abstracts</u>
POP	- <u>Population Sciences</u>
SCI	- <u>Science Citation Index</u>

NOTE: SER in this field indicates that the journal is one of the 6500 primary SERLINE journals.

Use the qualifier (AI) when searching with these tags because the abbreviations could be interpreted as other data elements.

A search for Japanese Index Medicus titles would be entered as follows:

IM (AI) AND JPN (LA)

11.3.15 MAIN HEADINGS (MH)

If the serial was cataloged by NLM since 1965, the MeSH main headings assigned by the cataloger appear in this element. SERLINE contains no subheadings of any type. The main headings are directly searchable, but SERLINE does not have the explode capability for subject searching.

11.3.16 CATLINE Citation Number (NO)

The CATLINE citation number is directly searchable in SERLINE to allow for rapid searching of titles previously located in CATLINE. Searchers may wish to check SERLINE for additional locations, to discover whether a particular journal is covered in MEDLINE, etc.

1.3.17 NLM CALL NUMBER (CA)

The NLM Call Number is directly searchable. In addition to actual call numbers, the following may also appear in the call number field:

ON ORDER - Title has been ordered for NLM collection.

ON ORDER - CIP - Title has been ordered for NLM collection. CIP cataloging has been done for the title.

ON ORDER - UCLA - Title has been ordered for NLM collection based on information received from UCLA Biomedical Library. UCLA may or may not already have the title.

IN PROCESS - Title has been received by NLM and is being cataloged.

CLASSED SEP - For numbered congresses only. Individual meetings are classed separately at NLM.

There is no location symbol for NLM in SERLINE. The presence or absence of a NLM call number indicates whether the title is held by NLM. NLM call numbers are required on interlibrary loan requests verified in SERLINE.

1.3.18 - 11.3.28 RESOURCE LIBRARY LOCATION SYMBOLS (L1 - L11)

Locator information is carried in the form of a five-character alpha-numeric code, which indicates that a library has at least the last five years of the title. The first two characters of the Location Symbol are numeric and identify the region to which a library belongs, and the last three characters are an alphabetic code which identifies a particular library within that region. The locator code NHMS indicates that the title is held in the New England Region (Region 01) by the Francis A. Countway Library of Medicine (Harvard Medical School). All resource libraries in a particular region which hold a serial will be listed in the record for that title. Locator information for approximately 120 participating medical libraries is carried in SERLINE. For a complete listing of these codes, see Appendices A and B.

These fields are Text Word searchable. Do not use the L1 to L11 field mnemonic when searching them. The (TW) qualifier can be used, but is not necessary because each code is a unique term and will not produce a Multi-Meaning message.

To find foreign language Index Medicus titles owned by Washington University (8WSL), search:

08WSL AND IM (AI) AND NOT ENG (LA)

11.3.29 - 11.3.39 REGIONAL LOCATION COUNTS (K1 - K11)

The number of resource libraries per region with codes listed for a title is directly searchable. This element is designed to assist in regional acquisitions planning by allowing the user to look for classes of serials owned by very few or very many resource libraries within a region. Remember to post-qualify any numerical search term which is the same as a previously used search statement number, even if the entire formulation is prequalified.

SS 2 /C?

USER:

(K6) 1 (K6) OR 2 OR 3

PROG:

PSTG (1777)

SS 3 /C?

1 AND IM (AI) AND ENG (LA)

11.3.40 REGION (RG)

This element is used to search all locations in a region at once to determine whether a title is held in any locations for a particular region without reference to specific resource libraries. The values are 01 to 11.

To search for all English Index Medicus titles not held in Region 3:

IM (AI) AND ENG (LA) AND NOT 03 (RG)

11.3.41 INITIAL YEAR OF PUBLICATION (YR)

The initial year of publication is directly searchable and rangeable. The (YR) element is always four digits long. Combined years are input as the first:

1967/68 - - 1967

Questioned dates are input as follows:

19?? - - 19

195? - - 195

11.3.42 FINAL YEAR OF PUBLICATION (CL)

The final year of publication is directly searchable and rangeable. The (CL) element follows the same rules as the (YR) element.

11.3.43 OPEN/CLOSED INDICATOR (OC)

The Open/Closed Indicator signifies whether the title is still open and continuing or has ceased or changed and is closed. The values are OPEN or CLOSED.

11.3.44 SERLINE CITATION NUMBER (SQ)

This element which consists of nine alphanumeric characters is directly searchable

11.3.45 PUBLISHER'S ADDRESS (AD)

SERLINE contains this element for lesser known publishers if the titles have been ordered or re-ordered by NLM in the last two years. The element may also include the message 'MUST ORDER DIRECT' if NLM has been informed that the title is not available through subscription agents. Address is not directly searchable.

SERLINE
APPENDIX A

11.5 LOCATOR CODES BY REGION

REGION 1

LIBRARY

<u>LIBRARY</u>	<u>LOCATOR CODE</u>
HARVARD UNIVERSITY, FRANCIS A. COUNTWAY LIBRARY OF MEDICINE . . .	01HMS
YALE UNIVERSITY MEDICAL LIBRARY	01YAL
UNIVERSITY OF CONNECTICUT HEALTH CENTER, LYMAN MAYNARD STOWE LIBRARY	01CON
BROWN UNIVERSITY, BIOLOGICAL SCIENCES LIBRARY	01BRN
DARTMOUTH COLLEGE, DANA BIOMEDICAL LIBRARY	01DAR
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL LIBRARY	01MAS
BOSTON UNIVERSITY MEDICAL SCHOOL LIBRARY	01BOS
TUFTS UNIVERSITY MEDICAL AND DENTAL LIBRARY	01TUF
UNIVERSITY OF VERMONT, DANA MEDICAL LIBRARY	01VER
MAINE MEDICAL CENTER LIBRARY	01MAN
SPRINGFIELD HOSPITAL MEDICAL CENTER LIBRARY	01SPH

REGION 2

NEW YORK ACADEMY OF MEDICINE	02NYA
NEW YORK STATE COLLEGE OF AGRICULTURE AT CORNELL, ALBERT R. MANN LIBRARY	02NAC
NEW YORK STATE MEDICAL LIBRARY	02NYS
NEW JERSEY COLLEGE OF MEDICINE & DENTISTRY LIBRARY	02NJN
CORNELL UNIVERSITY MEDICAL COLLEGE LIBRARY	02COR
STATE UNIVERSITY OF NEW YORK AT BUFFALO	02SBU
COLUMBIA UNIVERSITY MEDICAL LIBRARY	02CPS
STATE UNIVERSITY OF NEW YORK AT STONY BROOK	02SSB
RUTGERS, THE STATE UNIVERSITY, LIBRARY OF SCIENCE AND MEDICINE	02RUT
MEDICAL LIBRARY CENTER OF NEW YORK	02MLC
FARLEIGH DICKINSON SCHOOL OF DENTISTRY LIBRARY	02FDD
NEW YORK STATE PSYCHIATRIC INSTITUTE	02NYP
STATE UNIVERSITY OF NEW YORK MEDICAL RESEARCH LIBRARY (BROOKLYN)	02SBR
UPSTATE MEDICAL CENTER, STATE UNIVERSITY OF NEW YORK (SYRACUSE)	02SSY
WESTCHESTER MEDICAL CENTER LIBRARY	02WES

11.3.46 PRICE (PR)

Price listed is the amount NLM paid for one copy of the serial for the current year. Initially this element will not be present on the majority of titles.

11.3.47 GAPS (GA)

Issues missing from the NLM collection are listed in this element. If users have any of these issues and could provide them to NLM (or if they know that certain issues were never published), they should contact the Head, Serial Records Section. NOTE: Issues listed as missing may be requested from NLM. They may have been received at NLM after the last SERLINE update. Gaps are not directly searchable.

11.3.48 OUT OF PRINT NOTE (OP)

If NLM has attempted to buy back issues and been told they are no longer available an out of print note will appear in this element. This field is not directly searchable.

The remaining data elements appear only on titles indexed for MEDLINE.

11.3.49 LIST OF JOURNALS INDEXED SUBJECT HEADING (JD)

Serials which are indexed for Index Medicus have special general subject headings assigned for the subject listing which appears in the separate List of Journals Indexed in Index Medicus. These subject headings are directly searchable in the form they appear in List of Journals Indexed. Always use the qualifier (JD) when searching this element since some of these subject headings are the same as MeSH headings and Text Words.

11.3.50 COUNTRY OF PUBLICATION TREE NUMBER (PP)

This element cannot be searched using the explode search capability. To achieve the effect of explode, use the truncation symbol (:).

A search for all MEDLINE Titles published in North America would be entered as follows:

ALL Z1.107.567: (PP)

11.3.51 JOURNAL TITLE CODE (JC)

The three-character Journal Title Code is assigned to all serials indexed for MEDLINE. The (JC) element appears in all MEDLINE citations for a particular journal. It is directly searchable both in SERLINE and in MEDLINE.

11.3.52 JOURNAL SUBSET (SB)

Journals indexed in Abridged Index Medicus (AIM) contain an A in this field. M appears on all priority 1 or 2 Index Medicus titles. The subset tags are directly searchable both in SERLINE and in MEDLINE.

11.3.53 SPECIAL LIST INDICATOR (LI)

The Special List Indicator indicates that a journal is indexed for MEDLINE but

does not appear in Index Medicus. Citations from Special List Journals are printed in other publications. See list below.

<u>Indicator</u>	<u>Publication</u>
A	<u>Index of Audio-Visual Serials</u>
C	On-line only
D	<u>Index to Dental Literature</u>
H	<u>Hospital Literature Index</u>
N	<u>International Nursing Index</u>
R	<u>Population Sciences</u>

The Special List tags are directly searchable both in SERLINE and in MEDLINE.

11.3.54 SELECTIVELY INDEXED INDICATOR (IX)

If a journal is selectively indexed, that is, if only certain articles are indexed depending on their subject matter, the letter S appears in this field. Most journals indexed for MEDLARS are fully indexed. The Selectively Indexed Tag is directly searchable.

11.3.55 DISALLOW ABSTRACT TAG (AB)

Academic Press and Pergamon Press did not grant NLM permission to include abstracts from their journals in MEDLINE. The letter N appears in this element to indicate that abstracts from the journal will not appear in MEDLINE. The (AB) element is not searchable.

11.3.56 DATE ESTABLISHED (ES) (Rangeable)

This element contains the date the indexing authority information was established so that citations from the journal could be input to MEDLINE. The Date Established is directly searchable.

11.3.57 INDEXING NOTE (IN)

The Indexing Note may contain information about the first volume indexed, the reasons for discontinuing indexing, or possibly the change in a journal from Index Medicus to Special List Status (or vice versa). The Indexing Note is not directly searchable.

11.3.58 INDEXING PRIORITY (PY)

Possible values are 1, 2, and 3. Priority is not directly searchable.

11.3.59 INDEXING STATUS (ST)

Possible values are:

- 1 - Currently indexed
- 2 - Ceased publication
- 3 - No longer indexed
- 4 - Changed title

Status is directly searchable.

11.3.60 PULL DATE (LJ)

Pull Date is a calendar year. If the value is the current year, the title will appear in the current year's List of Journals Indexed in Index Medicus. Pull date is directly searchable.

11.3.61 DATE OF LAST MAJOR REVISION (MR)

Last date on which significant changes were made to any information which appears in the List of Journals Indexed.

11.4 SERLINE "PRINT COMMANDS

There are six standard "PRINT commands in SERLINE. The elements included in each are indicated in the Unit Record Table. In addition to "PRINT, "PRINT FUL and "PRINT DETAILED, SERLINE has the following:

"PRINT LOC or "PRINT LC - This command allows the user to print locations from all regions without listing the 11 regional element qualifiers.

"PRINT ACQUISITIONS or "PRINT AC - This command prints acquisitions information.

"PRINT INDEX or "PRINT IN - This command prints indexing authority information for serials indexed for MEDLINE.

The standard "PRINT format provides the information needed to verify inter-library loan requests.

SERLINE
APPENDIX A

5 LOCATOR CODES BY REGION

REGION 1

<u>BRARY</u>	<u>LOCATOR CODE</u>
RVARD UNIVERSITY, FRANCIS A. COUNTWAY LIBRARY OF MEDICINE . . .	01HMS
LE UNIVERSITY MEDICAL LIBRARY	01YAL
IVERSITY OF CONNECTICUT HEALTH CENTER,	
YMAN MAYNARD STOWE LIBRARY	01CON
OWN UNIVERSITY, BIOLOGICAL SCIENCES LIBRARY	01BRN
RTMOUTH COLLEGE, DANA BIOMEDICAL LIBRARY	01DAR
IVERSITY OF MASSACHUSETTS MEDICAL SCHOOL LIBRARY	01MAS
STON UNIVERSITY MEDICAL SCHOOL LIBRARY	01BOS
FTS UNIVERSITY MEDICAL AND DENTAL LIBRARY	01TUF
IVERSITY OF VERMONT, DANA MEDICAL LIBRARY	01VER
INE MEDICAL CENTER LIBRARY	01MAN
RINGFIELD HOSPITAL MEDICAL CENTER LIBRARY	01SPH

REGION 2

YORK ACADEMY OF MEDICINE	02NYA
YORK STATE COLLEGE OF AGRICULTURE AT CORNELL,	
ALBERT R. MANN LIBRARY	02NAC
YORK STATE MEDICAL LIBRARY	02NYS
JERSEY COLLEGE OF MEDICINE & DENTISTRY LIBRARY	02NJJ
RNELL UNIVERSITY MEDICAL COLLEGE LIBRARY	02COR
ATE UNIVERSITY OF NEW YORK AT BUFFALO	02SBU
UMBIA UNIVERSITY MEDICAL LIBRARY	02CPS
ATE UNIVERSITY OF NEW YORK AT STONY BROOK	02SSB
ERS, THE STATE UNIVERSITY, LIBRARY OF SCIENCE AND MEDICINE	02RUT
ICAL LIBRARY CENTER OF NEW YORK	02MLC
REIGH DICKINSON SCHOOL OF DENTISTRY LIBRARY	02FDD
YORK STATE PSYCHIATRIC INSTITUTE	02NYP
TE UNIVERSITY OF NEW YORK MEDICAL RESEARCH LIBRARY (BROOKLYN)	02SBR
STATE MEDICAL CENTER, STATE UNIVERSITY OF NEW YORK (SYRACUSE)	02SSY
TCHESTER MEDICAL CENTER LIBRARY	02WES

REGION 3

LIBRARY

LOCATOR CODE

COLLEGE OF PHYSICIANS OF PHILADELPHIA	03CPP
UNIVERSITY OF PENNSYLVANIA VETERINARY LIBRARY	03PEV
UNIVERSITY OF PENNSYLVANIA DENTAL LIBRARY	03PED
UNIVERSITY OF PENNSYLVANIA MEDICAL SCHOOL LIBRARY	03PEM
UNIVERSITY OF PITTSBURGH, FALK LIBRARY OF THE HEALTH PROFESSIONS	03PIT
UNIVERSITY OF PITTSBURGH, SCHOOL OF PUBLIC HEALTH LIBRARY	03PPH
PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE	03PPS
HERSHEY MEDICAL CENTER LIBRARY	03HER
EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE	03PPI
THOMAS JEFFERSON UNIVERSITY LIBRARY	03JEF
TEMPLE UNIVERSITY HEALTH SCIENCES CENTER LIBRARY	03TEM

REGION 4

JOHNS HOPKINS UNIVERSITY, WELCH MEDICAL LIBRARY	04JHU
UNIVERSITY OF MARYLAND, HEALTH SCIENCES LIBRARY	04MDB
MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND LIBRARY	04MCF
VIRGINIA COMMONWEALTH UNIVERSITY, TOMPKINS-MCCAW LIBRARY	04TMC
UNIVERSITY OF VIRGINIA MEDICAL LIBRARY	04VIR
WEST VIRGINIA UNIVERSITY	04WVA
GEORGE WASHINGTON UNIVERSITY MEDICAL LIBRARY	04GWU
GEORGETOWN UNIVERSITY MEDICAL LIBRARY	04GTU
HOWARD UNIVERSITY MEDICAL & DENTAL LIBRARY	04HOW
DUKE UNIVERSITY MEDICAL LIBRARY CENTER	04DUK
BOWMAN GRAY SCHOOL OF MEDICINE LIBRARY	04BOW
UNIVERSITY OF NORTH CAROLINA, HEALTH SCIENCES LIBRARY	04NCA

REGION 5

WAYNE STATE UNIVERSITY, SHIFFMAN MEDICAL LIBRARY	05WSU
UNIVERSITY OF KENTUCKY MEDICAL CENTER LIBRARY	05KEN
CASE WESTERN RESERVE UNIVERSITY, CLEVELAND HEALTH SCIENCES LIBRARY	05CLE
UNIVERSITY OF CINCINNATI, COLLEGE OF MEDICINE LIBRARY	05CIN
MICHIGAN STATE UNIVERSITY SCIENCE LIBRARY	05MSU
UNIVERSITY OF LOUISVILLE, KORNHAUSER HEALTH SCIENCES LIBRARY	05LOU
UNIVERSITY OF MICHIGAN MEDICAL CENTER LIBRARY	05MIC
MEDICAL COLLEGE OF OHIO AT TOLEDO LIBRARY	05OHT
UNIVERSITY OF DETROIT, SCHOOL OF DENTISTRY LIBRARY	05DET
OHIO STATE UNIVERSITY COLLEGE OF MEDICINE	05OSU

REGION 6

LIBRARYLOCATOR CODE

EMORY UNIVERSITY SCHOOL OF MEDICINE LIBRARY,	
A.W. CALHOUN MEDICAL LIBRARY	06EMU
UNIVERSITY OF FLORIDA, J. HILLIS MILLER HEALTH CENTER LIBRARY	06FLO
UNIVERSITY OF ALABAMA MEDICAL CENTER LIBRARY	06ALA
UNIVERSITY OF TENNESSEE MEDICAL UNITS LIBRARY	06TEN
VANDERBILT UNIVERSITY MEDICAL CENTER LIBRARY	06VAN
UNIVERSITY OF MIAMI SCHOOL OF MEDICINE LIBRARY	06MIA
MEDICAL UNIVERSITY OF SOUTH CAROLINA LIBRARY	06SCA
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER LIBRARY, ROWLAND MEDICAL LIBRARY	06MIS
MEDICAL COLLEGE OF GEORGIA LIBRARY	06GEO
UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS LIBRARY	06PUR
MEHARRY MEDICAL COLLEGE LIBRARY	06MEH
UNIVERSITY OF SOUTH FLORIDA MEDICAL CENTER LIBRARY	06SOF

REGION 7

JOHN CRERAR LIBRARY	07JCL
UNIVERSITY OF WISCONSIN, MIDDLETON MEDICAL LIBRARY	07WIS
INDIANA UNIVERSITY MEDICAL LIBRARY	07IND
MAYO CLINIC LIBRARY	07MAY
UNIVERSITY OF ILLINOIS MEDICAL CENTER LIBRARY	07ILL
UNIVERSITY OF MINNESOTA BIO-MEDICAL LIBRARY	07MIN
NORTHWESTERN UNIVERSITY MEDICAL LIBRARY	07NWU
UNIVERSITY OF IOWA MEDICAL LIBRARY	07IOW
MEDICAL COLLEGE OF WISCONSIN LIBRARY	07WIM

REGION 8

UNIVERSITY OF NEBRASKA MEDICAL CENTER LIBRARY	08NEB
UNIVERSITY OF COLORADO MEDICAL CENTER, DENISON MEDICAL LIBRARY	08COL
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE LIBRARY	08WSL
UNIVERSITY OF KANSAS MEDICAL CENTER, CLENDENING MEDICAL LIBRARY	08KAN
UNIVERSITY OF MISSOURI, COLUMBIA, MEDICAL SCHOOL LIBRARY	08MCO
UNIVERSITY OF UTAH, ECCLES MEDICAL LIBRARY	08UTA
COLORADO STATE UNIVERSITY, COLLEGE OF VETERINARY MEDICINE AND BIOMEDICAL SCIENCES LIBRARY	08CSU
CREIGHTON UNIVERSITY, SCHOOL OF MEDICINE AND SCHOOL OF PHARMACY LIBRARY	08CRU
ST. LOUIS UNIVERSITY MEDICAL CENTER LIBRARY	08STL
UNIVERSITY OF WYOMING, LIBRARY	08WYO
UNIVERSITY OF SOUTH DAKOTA, LIBRARY	08SOD
MENNINGER CLINIC LABORATORY, LIBRARY	08MEN

REGION 9

LIBRARYLOCATOR CODE

UNIVERSITY OF TEXAS, MEDICAL BRANCH, MOODY MEDICAL LIBRARY	09TGA
TULANE UNIVERSITY, SCHOOL OF MEDICINE, RUDOLPH MATAS MEDICAL LIBRARY	09TUL
LOUISIANA STATE UNIVERSITY MEDICAL CENTER LIBRARY (NEW ORLEANS)	09LNO
HOUSTON ACADEMY OF MEDICINE LIBRARY	09TEX
UNIVERSITY OF ARKANSAS MEDICAL CENTER LIBRARY	09ARK
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER LIBRARY	09OKL
UNIVERSITY OF TEXAS, SOUTHWESTERN MEDICAL SCHOOL LIBRARY	09TSW
UNIVERSITY OF TEXAS MEDICAL SCHOOL LIBRARY (SAN ANTONIO)	09TSA
LOUISIANA STATE UNIVERSITY MEDICAL CENTER LIBRARY (SHREVEPORT)	09LSU
UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE LIBRARY	09MEX
TEXAS MEDICAL ASSOCIATION MEMORIAL LIBRARY	09TMA
UNIVERSITY OF CALIFORNIA, LOS ALAMOS SCIENTIFIC LABORATORY	09CNM

REGION 10

UNIVERSITY OF WASHINGTON HEALTH SCIENCES LIBRARY	10WAS
UNIVERSITY OF OREGON MEDICAL SCHOOL LIBRARY	10ORE

REGION 11

UNIVERSITY OF CALIFORNIA AT LOS ANGELES, BIOMEDICAL LIBRARY	11CLA
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO, LIBRARY	11CSF
UNIVERSITY OF CALIFORNIA AT SAN DIEGO, BIOMEDICAL LIBRARY	11CSD
STANFORD UNIVERSITY MEDICAL CENTER, LANE MEDICAL LIBRARY	11STA
UNIVERSITY OF ARIZONA MEDICAL CENTER LIBRARY	11ARI
LOMA LINDA UNIVERSITY, VERNIER RADCLIFF MEMORIAL LIBRARY	11CLL
UNIVERSITY OF CALIFORNIA AT DAVIS, HEALTH SCIENCES LIBRARY	11CDA
UNIVERSITY OF CALIFORNIA AT IRVINE, MEDICAL SCIENCES LIBRARY	11CIR
UNIVERSITY OF SOUTHERN CALIFORNIA, NORRIS MEDICAL LIBRARY	11SOC
MEDICAL ASSOCIATION LIBRARY (LOS ANGELES COUNTY)	11LAC
UNIVERSITY OF NEVADA AT RENO LIFE AND HEALTH SCIENCES LIBRARY	11NEV
UNIVERSITY OF CALIFORNIA AT BERKELEY, GENERAL LIBRARY	11CBE
UNIVERSITY OF HAWAII, HAMILTON LIBRARY	11HAU
HAWAII MEDICAL LIBRARY	11HML

SERLINE
APPENDIX B

1.6 LOCATOR CODES - ALPHABETICAL LISTING

The list below is an alphabetical arrangement of SERLINE libraries in the briefest possible form for instant access to the LOCATOR CODE. The word LIBRARY has either been omitted entirely in the interests of brevity or is abbreviated in context to "Libr." All generic elements of a name are abbreviated except personal names and place names to avoid confusion.

As many brief entries are supplied as are deemed useful, i.e., the Lyman Maynard Stowe Library of the University of Connecticut Health Center appears under LYMAN MAYNARD STOWE, under STOWE and under CONNECTICUT.

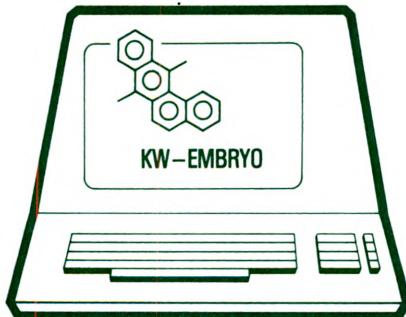
A. W. Calhoun (Emory)	06EMU	California (Univ) Los Alamos Sci Lab	09CNM
Albert R. Mann (Cornell)	02NAC	California (Univ)	
Alabama (Univ)	06ALA	(Los Angeles)	11CLA
Arizona (Univ)	11ARI	California (Univ) (San Diego)	11CSD
Arkansas (Univ)	09ARK	California (Univ) (San Francisco)	11CSF
Berkeley, Univ of California	11CBE	Case Western Reserve Univ	05CLE
Boston Univ	01BOS	Cincinnati (Univ)	05CIN
Bowman Gray Sch of Med.	04BOW	Clendening (Univ of Kansas)	08KAN
Brooklyn, State Univ of New York Med Res Lib	02SBR	Cleveland Health Sci Libr (Case Western Reserve)	05CLE
Brown Univ	01BRN	Coll of Pharm & Sci (Philadelphia)	03PPS
Buffalo, State Univ of New York	02SBU	Coll of Physicians (Philadelphia)	03CPP
Calhoun (Emory)	06EMU	Coll of Vet Med (Colorado State)	08CSU
California (Univ) (Berkeley)	11CBE	Colorado State Univ	08CSU
California (Univ) (Davis)	11CDA	Colorado (Univ)	08COL
California (Univ) (Irvine)	11CIR	Columbia Univ Med Libr	02CPS

Columbia, Univ of Missouri Med Sch	08MCO	Georgetown Univ	04GTU
Connecticut (Univ)	01CON	Georgia Med Coll	06GEO
Cornell, New York State Col of Agric	02NAC	Gray	04BOW
Cornell Univ Albert R. Mann Libr	02NAC	Hawaii Medical Library	04HML
Cornell Univ Med Coll Libr	02COR	Hawaii (Univ)	04HAU
Countway (Harvard)	01HMS	Hershey Med Cent	03HER
Creighton Univ	08CRU	Hopkins	04JHU
Crerar Libr	07JCL	Houston Acad of Med	09TEX
Dana (Dartmouth)	01DAR	Howard Univ	04HOW
Dana (Univ of Vermont)	01VER	Illinois (Univ)	07ILL
Dartmouth Coll	01DAR	Indiana Univ	07IND
Davis, Univ of California	11CDA	Iowa (Univ)	07IOW
Denison (Univ of Colorado)	08COL	Irvine, Univ of California	11CIR
Dent Libr, Univ of Pennsylvania	03PED	J. Hillis Miller (Univ of Florida)	06FLO
Detroit (Univ)	05DET	Jefferson Univ	03JEF
Dickinson Sch of Dent	02FDD	John Crerar Libr	07JCL
Duke Univ	04DUK	Johns Hopkins Univ	04JHU
Eastern Pennsylvania Psychiatr Inst	03PPI	Kansas (Univ)	08KAN
Eccles (Utah)	08UTA	Kentucky (Univ)	05KEN
Emory Univ	06EMU	Kornhauser (Univ of Louisville)	05LOU
Falk (Univ of Pittsburgh)	03PIT	Lane (Stanford)	11STA
Farleigh Dickinson Sch of Dent	02FDD	Loma Linda Univ	11CLL
Florida (Univ)	06FL0	Los Alamos Sci Lab	09CNM
Francis A. Countway (Harvard)	01HMS	Los Angeles County Med Assoc	11LAC
		Los Angeles, Univ of California	11CLA

Louisiana State (New Orleans)	09LNO	Minnesota (Univ)	07MIN
Louisiana State (Shreveport)	09LSU	Mississippi (Univ)	06MIS
Louisville (Univ)	05LOU	Missouri (Univ) (Columbia)	08MCO
Lyman Maynard Stowe (Univ of Conn)	01CON	Moody (Univ of Texas)	09TGA
Maine Med Center	01MAN	Nebraska (Univ)	08NEB
Mann (Cornell)	02NAC	Nevada (Univ)	11NEV
Maryland (Univ)	04MDB	New Jersey Coll of Med & Dent	02NJJN
Maryland, Med & Chir Fac	04MCF	New Mexico (Univ)	09MEX
Massachusetts (Univ)	01MAS	New Orleans, Louisiana State Univ	09LNO
Matas (Tulane)	09TUL	New York, State Univ (Brooklyn)	02SBR
Mayo Clin	07MAY	New York, State Univ (Buffalo)	02SBU
Med & Chir Fac of Maryland	04MCF	New York, State Univ (Stony Brook)	02SSB
Med Coll of Georgia	06GEO	New York, State Univ (Syracuse)	02SSY
Med Coll of Ohio (Toledo)	050HT	New York Acad of Med	02NYA
Med Coll of Wisconsin	07WIM	New York State Coll of Agric (Cornell)	02NAC
Med Libr Cent of New York	02MLC	New York State Med Libr	02NYS
Med Sch, Univ of Pennsylvania	03PEM	New York State Psychiatr Inst	02NYP
Med Univ of South Carolina	06SCA	Norris (Univ of Southern California)	11SOC
Meharry Med Coll	06MEH	North Carolina (Univ)	04NCA
Menninger Clin	08MEN	Northwestern	07NWU
Miami (Univ)	06MIA	Ohio State Univ	050SU
Michigan (Univ)	05MIC	Oklahoma (Univ)	090KL
Michigan State Univ	05MSU		
Middleton (Univ of Wisconsin)	07WIS		
Miller (Univ of Florida)	06FLO		

Oregon (Univ)	100RE	South Dakota (Univ)	08SOD
Pennsylvania, Eastern Pennsylvania Psychiatr Inst	03PPI	South Florida (Univ)	06SOF
Pennsylvania (Univ) Dent Libr	03PED	Southern California (Univ) Norris Med Libr	11SOC
Pennsylvania (Univ) Med Sch	03PED	Southwestern Med Sch (Univ of Texas)	09TSW
Pennsylvania (Univ) Vet Libr	03PEV	Spring Hosp (Massachusetts)	01SPH
Philadelphia Coll of Pharm & Sci	03PPS	St. Louis Univ	08STL
Philadelphia, Coll of Physicians	03CPP	Stanford Univ	11STA
Pittsburgh (Univ) Falk Libr	03PIT	State Univ of New York (Buffalo)	02SBU
Pittsburgh (Univ) Sch of Public Health	03PPH	State Univ of New York (Stony Brook)	s2SSB
Psychiatric Inst, New York State	02NYP	State Univ of New York (Syracuse)	02SSY
Puerto Rico (Univ)	06PUR	State Univ of New York Med Res Libr (Brooklyn)	02SBR
Radcliff (Loma Linda)	11CLL	Stony Brook, State Univ of New York	02SSB
Reno, Univ of Nevada	11NEV	Stowe (Univ of Conn)	01CON
Rowland (Univ of Mississippi)	06MIS	SUNY (Brooklyn)	02SBR
Rudolph Matas (Tulane)	09TUL	SUNY (Buffalo)	02SBU
Rutgers Univ	02RUT	SUNY (Stony Brook)	02SSB
San Diego, Univ of Calif	11CSD	SUNY (Syracuse)	02SSY
San Francisco, Univ of California	11CSF	Syracuse, State Univ of New York	02SSY
Shiffman (Wayne State)	05WSU	Temple Univ	03TEM
Shreveport, Louisiana State Univ	09LSU	Tennessee (Univ)	06TEN
South Carolina, Med Univ	06SCA	Texas Med Assoc	09TMA
		Texas (Univ) Med Sch (San Antonio)	09TSA

Texas (Univ) Mood Med Libr	09TGA	Virginia (Univ)	04VIR
Texas (Univ) Southwestern Med Sch	09TSW	Virginia Commonwealth Univ	04TMC
Thomas Jefferson Univ	03JEF	Washington, George Washington Univ	04GWU
Toledo, Med Coll of Ohio	050HT	Washington (Univ) (Seattle)	10WAS
Tomkins-McCaw (Virginia Commonwealth Univ)	04TMC	Washington Univ (St. Louis)	08WSL
Tufts Univ	01TUF	Wayne State Univ	05WSU
Tulane Univ	09TUL	Welch (Johns Hopkins)	04JHU
UCLA	11CLA	West Virginia Univ	04WVA
Upstate Med Cent (Syracuse)	02SSY	Westchester Medical Center Library	02WES
Utah (Univ)	08UTA	Western Reserve Univ	05CLE
Vanderbilt Univ	06VAN	Wisconsin, Med Coll	07WIM
Vermont (Univ)	01VER	Wisconsin (Univ)	07WIS
Vernier Radcliff (Loma Linda)	11CLL	Wyoming (Univ)	08WYO
Vet Libr, Univ of Pennsylvania	03PEV	Yale Univ	01YAL



NATIONAL LIBRARY OF MEDICINE
SPECIALIZED INFORMATION SERVICES
TOXICOLOGY INFORMATION PROGRAM

TOXLINE

TOXICOLOGY INFORMATION ONLINE

CONDENSED

Bethesda, Maryland 20209

OXLINE
DEFINED

TOXLINE (TOXicology Information on-LINE) is the National Library of Medicine's extensive collection of computerized toxicology information containing over 400,000 references to published human and animal toxicity studies, effects of environmental chemicals and pollutants, adverse drug reactions, and analytical methodology. This rapidly expanding data base, assembled by the Toxicology Information Program and updated monthly, contains full bibliographic citations, almost all with abstracts and/or index terms, and Chemical Abstracts Service (CAS) Registry Numbers. TOXLINE grows at the rate of approximately 140,000 records/year. Older information is in the TOXLINE backfiles, TOXBACK74 (1974-1976, with 275,506 references) and TOXBACK65 (pre-1965 through 1973, with 387,377 references). TOXLINE information is derived from five major secondary sources (1-5) and six special collections (6-11) of material. The component subfiles included in TOXLINE and its backfiles are:

- 1) Chemical Abstracts Service: "Chemical-Biological Activities" (CBAC), from 1965. Also Section 8 (Radiation Biochemistry), Section 59 (Air Pollution and Industrial Hygiene), Section 60 (Sewage and Waste), Sections 62-64 (Essential Oils and Cosmetics, Pharmaceuticals, and Pharmaceutical Analysis), from 1975.
- 2) BioSciences Information Service: "Abstracts on Health Abstracts on Health Effects of Environmental Pollutants" (HEEP), from 1972.
- 3) American Society of Hospital Pharmacists: "International Pharmaceutical Abstracts," (IPA), from 1970.
- 4) National Library of Medicine: "Toxicity Bibliography" (TOXBIB), from 1968.
- 5) Environmental Protection Agency: "Pesticides Abstracts", (formerly "Health Aspects of Pesticides Abstract Bulletin") (PESTAB, formerly HAPAB), from 1966.
- 6) Environmental Mutagen Information Center File (EMIC), Oak Ridge National Laboratory from 1950, (all in TOXLINE).
- 7) Environmental Teratology Information Center File (ETIC), Oak Ridge National Laboratory from 1950, (all in TOXLINE).
- 8) Smithsonian Science Information Exchange: Toxicology/ Epidemiology Research Project (RPROJ), beginning October 1978.
- 9) National Technical Information Service: Toxicology Document and Data Depository (TD3), beginning October 1979.
- 10) Hayes File on Pesticides (HAYES), 1940-1966 in TOXBACK65.
- 11) Toxic Materials Information Center (TMIC) file, Oak Ridge National Laboratory 1971-1975 in TOXBACK65.

**XLINE
ACCESSED**

TOXLINE is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland by direct telephone line or via nationwide networks using telephone lines and sm computers with access nodes located in many major cities. TOXLINE and TOXBACK65 are available online at NLM, while TOXBACK65 is available only through offsearch NLM.

**XLINE
SEARCHED**

Citations on a given subject may be retrieved from TOXLINE by entering the desired free text terms as they appear in titles, keywords, and abstracts of articles. Chemical substances can be searched by entering their corresponding Chemical Abstracts Service (CAS) Registry Numbers, trade names, synonyms, after consulting the CHEML file. There is no controlled vocabulary governing the inclusion or exclusion of terms in TOXLINE. Terms may be entered as a single term or combined by means of the Boolean operators AND, OR and AND NOT. Searches may be limited to specific publication years. Citations and abstracts may be printed online at the user's terminal, or off and mailed to the user from NLM. Users may select a print format varying from a brief identification of author(s), title, and source to a complete listing of the bibliographic record, including the abstract. Citations and abstracts may be SORTed at the user's initiation in OFFSEARCH or offline printing.

**XLINE
ITS**

Users may store their own searches, to run monthly against the updated material. They have automatic SDI's run in batch mode by NLM once they have been tested and submitted to NLM for processing.

**XLINE
AVAILABILITY**

TOXLINE is available at NLM Monday, Wednesday, and Thursday from 3:00 a.m. to 8:00 p.m., and Tuesday and Friday 3:00 a.m. to 9:00 p.m., and Saturday from 8:30 a.m. to 5:00 p.m. (Eastern Time.)

**XLINE
DST**

The cost of access to TOXLINE and its backfiles is \$35 per hour during prime time (10:00 a.m. to 5:00 p.m.), and \$28 per hour at all other times. There is a charge of \$0.27 for each page of offline printout.

**XLINE
USER SERVICES**

For Online Systems services including access to the TOXLINE file contact:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-6193

For TOXLINE content including search strategies contact:

Specialized Information Services
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-1131

NATIONAL LIBRARY of MEDICINE

FACT SHEET

Bethesda, Maryland 20209

May 1979

TOXLINE®

What is TOXLINE? TOXLINE (TOXicology Information on-LINE) is the National Library of Medicine's extensive collection of computerized toxicology information containing over 570,000 references to published human and animal toxicity studies, effects of environmental chemicals and pollutants, adverse drug reactions, and analytical methodology. This rapidly expanding data base, assembled by the Toxicology Information Program and updated monthly, contains full bibliographic citations, almost all with abstracts and/or indexing terms, and Chemical Abstracts Service (CAS) Registry Numbers from secondary sources, 1974 forward. TOXLINE also contains toxicology/epidemiology research projects from the Smithsonian Science Information Exchange (SSIE) data base. TOXLINE grows at the rate of approximately 140,000 records/year. Older information, approximately 400,000 references, is in the TOXLINE backfile, TOXBACK. TOXLINE information is derived from five major secondary sources and six special collections of material. The component subfiles included in TOXLINE/TOXBACK are:

1. Chemical Abstracts Service: Chemical-Biological Activities (CBAC), from 1965. Also Section 8 (Radiation Biochemistry), Section 59 (Air Pollution and Industrial Hygiene), and Section 60 (Sewage and Wastes) from 1975.
2. BioSciences Information Service: Abstracts on Health Effects of Environmental Pollutants, from 1972.
3. American Society of Hospital Pharmacists: International Pharmaceutical Abstracts, from 1970.
4. National Library of Medicine: Toxicity Bibliography, from 1968.
5. Environmental Protection Agency: Pesticides Abstracts, (formerly Health Aspects of Pesticides Abstract Bulletin) from 1966.
6. Environmental Mutagen Information Center File, Oak Ridge National Laboratory, from 1960 (all in TOXLINE).
7. Environmental Teratology Information Center File, Oak Ridge National Laboratory, from 1950, (all in TOXLINE).
8. Toxicology/Epidemiology Research Projects from the Smithsonian Science Information Exchange (SSIE) data base, beginning October, 1978.
9. Hayes File on Pesticides 1940-1966 (citations only).

10. Toxic Materials Information Center File, Oak Ridge National Laboratory, (1971-1975).

11. Teratology File (1960-1974).

12. *Epidemiology file as of May 1979*

TOXLINE is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via nationwide networks using telephone lines and small computers with access nodes located in many major cities.

How is TOXLINE accessed?

How is TOXLINE searched?

Citations on a given subject may be retrieved from TOXLINE by entering the desired free text terms as they appear in titles, keywords, and abstracts of articles. Chemical substances can be searched by entering their corresponding Chemical Abstracts Service (CAS) Registry Numbers, trade names, synonyms, after consulting the CHEMLINE file. There is no controlled vocabulary governing the inclusion or exclusion of terms in TOXLINE. Terms may be entered singly or combined by means of the Boolean operators AND, OR and AND NOT. Searches may be limited to specific years of publication, secondary sources, or authors, since these are all searchable elements. Citations and abstracts may be printed online at the user's terminal, or offline and mailed to the user from NLM. Users may select a print format varying from a brief identification of author(s), title, and source to a complete listing of the bibliographic record, including the abstract.

TOXLINE Selective Dissemination of Information (SDI)

Users may store their own searches, to run monthly against the updated material, or have automatic SDI's run in batch mode by NLM once they have been tested and submitted to NLM for processing.

What time period is covered by TOXLINE?

TOXLINE contains bibliographic citations and abstracts from secondary sources, 1974 forward. Older information is in a TOXLINE backfile, TOXBACK. TOXBACK contains approximately 400,000 records, available by OFFSEARCH (in batch mode).

Where is TOXLINE available?

TOXLINE is available at approximately 800 academic, commercial and government organizations.

When is TOXLINE available?

TOXLINE is available at NLM Monday, Wednesday, and Thursday from 3:00 a.m. to 6:00 p.m., and Tuesday and Friday from 3:00 a.m. to 9:00 p.m. (Eastern Time).

How much does TOXLINE cost?

The cost of access to the National Library of Medicine's online data bases is \$15 per hour during "prime time" (10:00 a.m. to 11:30 a.m. and 1:00 p.m. to 5:00 p.m.), and \$8 per hour at all other times. The Library also charges 12c for each page of offline printout.

How does one subscribe to TOXLINE?

Institutions wishing to become TOXLINE subscribers must sign agreements with the National Library of Medicine and with its billing agent, the National Technical Information Service. Subscribing institutions must agree to send one professional staff member for a five-day training course which covers all NLM online files.

For further information, interested institutions should contact:

TOXLINE, Toxicology Information Program
Specialized Information Services

National Library of Medicine, Room C6B
8600 Rockville Pike, Bethesda, Md. 20209
Telephone: (301) 496-1131

PART 12
TOXLINE/TOXBACK

12.1 INTRODUCTION

TOXLINE (TOXicology Information on-LINE) is an interactive bibliographic retrieval system for toxicology consisting of ten (10) discrete subfiles in the master data base. The component subfiles include Chemical-Biological Activities (CBAC); Sections 1-5 from 1965; Sections 62-64 from 1975; and Section 8 (Radiation Biochemistry), Section 59 (Air Pollution and Industrial Hygiene), and Section 60 (Sewage and Wastes), from 1975; Toxicity Bibliography (TOXBIB) from 1968; Abstracts on Health Effects of Environmental Pollutants (HEEP) from 1972; International Pharmaceutical Abstracts (IPA) from 1970; Pesticides Abstracts (PESTAB) (formerly Health Aspects of Pesticides Abstracts Bulletin (HAPAB)) from 1966; Environmental Mutagen Information Center file (EMIC) from 1960; Environmental Teratology Information Center file (ETIC) from 1950; Toxic Materials Information Center file (TMIC) 1971-1975; a teratology file (TERA) 1960-1974; and a special pesticide collection of materials gathered by Dr. W. J. Hayes, Jr. (1940-1966). All of the subfiles are arranged so that they can be searched simultaneously in response to a single query. Each record in the TOXLINE data base contains a full bibliographic citation, most with abstracts and/or indexing terms, and Chemical Abstracts Service (CAS) Registry Numbers. Since each secondary source has its own internal standards, a substantial effort has been employed in restructuring the material as presented into a standardized format suitable for the ELHILL system. The exact nature of each secondary source is described in a later section. Online retrieval from TOXLINE is based on free-text searching of most words in titles, index fields, and abstracts

As of June 1978 the online file contained approximately 450,000 records, material published in secondary sources from 1974 forward. In TOXLINE are all of the EMIC and ETIC material, regardless of time coverage. Older information, approximately 380,000 records, is in TOXBACK (the TOXLINE backfile available by OFFSEARCH at NLM only). The HAYES, HAPAB, and TERA subfiles are only available in TOXBACK.

12.2 GENERAL ASSISTANCE TELEPHONE NUMBERS

The telephone number for questions on system and communication problems, program interpretation, etc., is (800) 638-8480 or (301) 496-6193, MEDLARS Management Section. The telephone number for technical assistance in search strategy, etc., is (301) 496-1131, the Toxicology Information Program.

12.3 ENTERING THE TOXLINE FILE

Subscribers may access the TOXLINE file by following NLM login procedures. To switch to TOXLINE, users enter FILE TOXLINE.

12.4 TOXLINE UNIT RECORD

The unit record in TOXLINE consists of seventeen (17) data elements. Each element is identifiable to ELHILL during search by a two character, alphabetic mnemonic. Each element has the potential of being either a searchable element, a printable element or both. The table below indicates the basic characteristics of the

available elements.

REMINDER: Online, users can always obtain a description of the file and a list of printable and searchable elements by entering EXPLAIN UNIT RECORD.

FILE TOXLINE
YOU ARE NOW CONNECTED TO THE TOXLINE FILE.
USER:
EXPLAIN UNIT RECORD

TABLE OF SEARCHABLE AND PRINTABLE DATA ELEMENTS

<u>ELEMENT NAME</u>	<u>ABBREV.</u>	<u>DIRECT</u>	<u>PRINT-</u>	<u>PRINT OPTIONS</u>		
		<u>SEARCH</u>	<u>ABLE</u>	<u>PRT</u>	<u>PRT</u>	<u>PRT</u>
Secondary Source ID	SI	YES	YES	YES	YES	YES
Author(s)	AU	YES	YES	YES	YES	YES
Article Title	TI	NO* (see TW)	YES	YES	YES	YES
Author Address	AA	NO	YES	NO	YES	YES
Language	LA	YES	YES	NO	YES	YES
Journal Coden	JC	YES	YES	NO	NO	YES
Int Stand Ser No (ISSN)	IS	YES	YES	NO	NO	YES
Journal Source/Citation	SO	NO	YES	YES	YES	YES
Abstract	AB	NO* (see TW)	YES	NO	YES	YES
CAS Registry Number	RN	YES	YES	NO	NO	YES
Text words (unique terms in titles, abstracts, keywords)	TW	YES	NO	NO	NO	NO
Index Tags**	IT	YES	YES	NO	NO	YES
Data Tags**	DT	YES	YES	NO	NO	YES
Publication year	YP	YES	NO	NO	NO	NO
Source and time frame	ST	YES	NO	NO	NO	NO
Keywords (textracted unique terms from TI, KW)	KW	YES***	NO	NO	NO	NO
Keywords (index terms from TOXBIB, IPA, etc.)	KW	NO	YES	NO	NO	YES

*The TI, AB, and KW fields are not directly searchable. However for search purposes, they are combined to form the searchable TW field. TI or AB may be specified in STRINGSEARCH.

**On CBAC since 11/76.

***A new experimental search field, of textracted uniterms.

The following is a description of each of the data elements in the unit record.

12.4.1 SECONDARY SOURCE ID (SI)

The secondary source of the bibliographic reference consists of three distinct elements separated by a slash (/) symbol.

- a) A 3 to 6 character acronym identifying the component subfile in the TOXLINE data base, i.e., IPA, TOXBIB, HEEP, CBAC or CA, PESTAB (formerly HAPAB), EMIC, ETIC, TMIC, TERA, and HAYES.
- b) A 2 character identification of the year (or volume in the case of Chemical Abstracts (CA)) of the secondary source, except starting with CA/079/073367R, there is a 3 character volume number for CA materials.
- c) A 4 to 7 digit TOXLINE accession number which is an exact 1:1 mapping back to the secondary source for the CA, IPA, HEEP, and PESTAB subfiles. Note for Volumes 1-14 of CBAC, the SI field in TOXBACK prints as CA/XXX/123456 where XXX is the 3 digit volume and abstract number of CBAC, not CA. This SI field appears in each of the three print options; i.e., (SI) HEEP/75/10645. Therefore, the secondary source designation of HEEP/75/10645 would be translated as: Health Effects of Environmental Pollutants, Abstract Number 10645, year 1975.

When one is browsing, it may be useful to enter PRT SI, TI as this allows the searcher to identify which subfile the documents are from, as well as year(s), type of records, etc.

12.4.2 AUTHOR(S) (AU)

Each author's name as presented by the secondary source will appear unaltered when printing the TOXLINE record. For search purposes the secondary source entry for each author is modified in most instances to develop a standardized format. The searchable form of an author's name is usually an unpunctuated field consisting of the last name followed by up to four initials, followed by any additional appellation modifier such as JR or SR. For example, the author Whalen J. Hayes, Jr. is most often carried in the author search field as HAYES WJ JR. However, because of the variation supplied by the various secondary sources, the author is also identified as HAYES W, HAYES WJ, and HAYES WJ JR. Some authors' names also include apostrophes, hyphens, spaces, etc. e.g., O'Brien, van der Velde. It may be wise to ALWAYS use a NEIGHBOR command to be sure of the exact forms of entry of the author's name, or use the truncation symbol of the colon (:), (e.g., HAYES W:).

12.4.3 ARTICLE TITLE (TI)

The article title is printable, but can be searched directly only via the STRINGSEARCH capability. Individual words or word fragments in the article title are searchable only as components of the TEXT WORD (TW) field. Foreign titles usually appear as translated or transliterated titles, sometimes set off by opening and closing punctuation marks.

12.4.4 AUTHOR ADDRESS (AA)

The author address is printable, but not directly searchable. It may be stringsearched. Not all subfiles have this field.

12.4.5 LANGUAGE (LA)

The language category is carried in the unit record, as given by the secondary source. The exact designation is as expressed by the secondary source, and therefore is susceptible to major variations over the entire data base. For example, the language French may be designated as FR or FRE or FREN or FRENCH. It should be remembered that only seven (7) component bibliographic files out of the ten contain a language data element. Always neighbor the language i.e., "NBR RUS (LA). Not all secondary sources specify ENG, or ENGLISH, if in fact the article is in English.

12.4.6 JOURNAL CODEN (JC)

The journal coden is a 5 character code designating the journal described in the source category. The codens for most serial publications can be found in CODEN for Periodical Titles, American Society for Testing Materials (ASTM) Philadelphia, Pennsylvania 1970, 2 vols. The coden is both searchable and printable. It should be remembered that only four (4) component bibliographic files out of ten contain a journal coden data element with two of these four files containing this element only since 1974. Example: (JC) JAMAA is the Journal coden for Journal of the American Medical Association (JAMA). Exception: TOXBIB has the Journal Title Code (JC) used by NLM.

12.4.7 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN for the journal in which the article appears is directly searchable. This data element is an eight digit number in the form 0000-0000, and currently appears only in the TOXBIB subfile.

12.4.8 SOURCE JOURNAL/CITATION (SO)

The source field contains the bibliographic citation for the article. It contains the primary journal source (normally in the abbreviated form); the volume; the issue; pagination; year of publication; and occasionally, the number of references appended to the original article. The contents of this data field are exactly as presented by the secondary source, which creates extensive variation in punctuation and journal abbreviations.

12.4.9 ABSTRACT (AB)

The abstract field contains a mixture of different annotations to the citation including full abstracts, IPA keywords, and other brief notations as provided by the secondary source. This field is printable but can only be directly searched through the STRINGSEARCH capability. Individual words or word fragments appearing in the abstract field are searchable only as TEXT WORDS (TW).

12.4.10 CAS REGISTRY NUMBER (RN)

The Chemical Abstracts Service (CAS) Registry Number is the unique identification of the chemical substance(s) as reported in the article. The Registry number is normally expressed as a hyphenated number of up to six digits, a hyphen, followed by two digits, a hyphen, and then a single digit (e.g., 123464-25-8; 50-78-2). When the Registry number is fewer than 9 characters, it must NOT be searched with the leading zeros. For example, the Registry number 309-00-2 is searched exactly as presented, including the hyphens. CAS Registry Numbers are presently available in five of the ten component subfiles (CBAC, HEEP, HAPAB, EMIC, ETIC.) Therefore, do NOT use the CAS Registry Number by itself as a substitute for searching for a chemical. One must "OR" together additional trade names, synonyms, etc.

12.4.11 TEXT WORDS (unique terms) (TW)

The text word field is a search category only. It is generated from the words and word fragments that occur in the title, abstract, and keyword fields. Only one occurrence of a word or word fragment is entered from each bibliographic reference, regardless of how many times the term may appear in either the title or abstract field. For example, if the word "metabolism" appears in the title of an article, and also appears twice in the abstract field of that same article, reference to "metabolism" is entered only once in the TEXT WORD (TW) field. If the abbreviation "metab" is used in the same document, this would also be a searchable text word. The searchable terms are controlled by term generation programs and a stop-word list.

12.4.12 INDEX TAGS (IT)

The index tags were assigned by Chemical Abstracts to CBAC documents since November, 1976. The tags are in the abbreviated form as well as the full words. They are directly searchable with the abbreviation (IT) and print under PRINT DETAILED. This tagging concept is under evaluation.

Information Tags (IT)

<u>Encoded Format</u>	<u>Expanded Format</u>
ADT	Antidotes
AM	Animal models (used in biomedical experiments)
CARC	Carcinogens
CHA	Chromatographic analysis (all types)
DCM	Drug-chemical metabolites
ELEM	Elemental analysis (includes functional group analysis)
FA	Food additives (includes preservatives)
GRP	Growth promotants
METL	Heavy metals
MS	Mass spectroscopy
MUTA	Mutagens
NMR	Nuclear magnetic resonance
PEST	Pesticides
RA	Radiochemical analysis
SPEC	Spectrochemical analysis (includes densitometry, fluorometry, ir, uv, etc.)

4.13 DATA TAGS (DT)

The data tags have also been assigned by Chemical Abstracts to CBAC documents since November 1976. They are in both the encoded and expanded format and are directly searchable using the abbreviation (DT). The data tags are also under evaluation.

Data Tags (DT)

Encoded Format

Expanded Format

BC	Blood (serum, plasma) concentration of some chemical substance
CTD	Chronic toxic dose
HEM	Hematology (Hemoglobin, Hematocrit, Total Leucocytes, etc.)
LC	Lethal concentration (includes LC50 and any variants)
LD	Lethal dosage (includes LD50 and any variants)
MPL	Maximum permissible limit
TD	Teratogenic dose
TLV	Threshold limit value
UC	Urine concentration of some chemical substance

4.14 PUBLICATION YEAR (YP)

The year of primary publication, as identified in the source field, is expressed as a two-digit numeric; e.g., 1976 appears as 76. This field is searchable and may be used to limit a search statement to a specific year. This data element is not rangeable in TOXLINE or TOXBACK. It is not displayed as a separate category of the unit record, since it is part of the source field.

To limit a search, one could enter:

5 AND 77 (YP)

Where 5 is search statement 5. This limits the papers in search statement 5 to only those published in 1977 primary journals.

4.15 SOURCE AND TIME FRAME (ST)

This consists of a 4 digit number. The first 2 digits are the year, the next 2 digits are the month. This is the update tag added to each citation the month it is entered into TOXLINE; e.g., 7803 would be the March, 1978 update.

4.16 KEYWORDS (KW)

This is an experimental searchable field of uniterms extracted from the title and keyword fields (TI, KW). The search abbreviation is (KW). Note, terms from the title, abstract, and keyword fields (TI, AB, KW) are extracted and searchable as Text Words (TW). Fewer postings will generally result using (KW) than (TW), since (TW) has terms from the abstract included, and not all subfiles have a keyword field.

12.4.17 KEYWORDS (KW)

This is a PRINT field only, containing the terms from such subfiles as TOXBIB, IPA, etc. The terms in this field are extracted as uniterms into the TEXT WORD (TW) field as well as the experimental search field of Keywords (KW) which includes only titles and keywords.

12.5 TOXLINE TERM GENERATION

The availability of text words as search terms for TOXLINE is controlled by two distinct factors: (1) term generation, and (2) stopwords. To effectively search TOXLINE, an understanding of these two factors is necessary.

Term Generation is accomplished by a computer program which examines the data in the title, abstract and keyword fields of each record character by character; and based upon a series of rules, generates candidate search terms.

Rules of Term Generation:

- (1) A candidate term is generated for any alphabetic, numeric or alphanumeric string up to 36 contiguous characters.
- (2) Essentially all special characters (commas, periods, slash marks, colons, etc.) are converted to blanks which serve as term delimiters. (Commas are not delimiters when they occur with a hyphen as described below.)
- (3) The hyphen is not considered a special character under the following circumstances:

a) When the hyphen is preceded by a numeric and followed by a SINGLE alphabetic character. This allows one to keep and search such terms as:

2,4-D

2,4,5-T

b) When the hyphen is preceded by up to three (3) alphabetic characters followed by a numeric string. This allows one to keep and search such terms as:

LD-50

SKF-525

- (4) All other special characters are eliminated from candidate terms.

The stopword function deletes unwanted terms from the candidate list provided by the term generation program. Words are deleted either by rules for discarding terms (with any applicable exceptions) or when matched with a stopword list. See PART 4, APPENDIX.

Rules of Term Deletion:

- (1) The term is the single character A.
- (2) The term is an all-numeric string (e.g., 1000).
- (3) The term appears on the stopword list.
- (4) The term consists of numeric characters followed by a single alphabetic character, e.g., 13I.

As an example, let us consider the following sentence from an abstract:

"Changes induced in 23 unpremedicated patients following the I.V. administration of CT-1341, a combination of alphaxalone (3alpha-hydroxy-5alpha-pregnane-11,20-dione) 9 mg./ml and alphadolone acetate (21-acetoxy-3alpha-hydroxy-5alpha-pregnane-11,20-dione) 3 mg./ml. were studied."

The term generation program will generate and number each term from the sentence, and the stopword function will execute the actions shown based on the rules defined above. It should be pointed out that term control does not apply to STRINGSEARCH. Below is a table indicating results after applying Rules of Term Generation and Rules of Term Deletion for the above sample sentence.

<u>Term No.</u>	<u>Candidate Term</u>	<u>Action</u>	<u>Deletion Rule</u>	<u>Notes</u>
1	CHANGES	Saved		
2	INDUCED	Saved		
3	IN	Deleted	(3)	
4	23	Deleted	(2)	
5	UNPREMEDICATED	Saved		
6	PATIENTS	Saved		
7	FOLLOWING	Deleted	(3)	
8	THE	Deleted	(3)	
9	I	Saved		
10	V	Saved		Period is a special character
11	ADMINISTRATION	Saved		
12	OF	Deleted	(3)	
13	CT-1341	Saved		Hyphen exception
14	A	Deleted	(1)	
15	COMBINATION	Saved		
16	OF	Deleted	(3)	
17	ALPHAXALONE	Saved		
18	3ALPHA	Saved		
19	HYDROXY	Saved		
20	5ALPHA	Saved		
21	PREGNANE	Saved		
22	11	Deleted	(2)	Comma is a special character
23	20	Deleted	(2)	
24	DIONE	Saved		
25	9	Deleted	(2)	
26	MG	Deleted	(3)	(Also Magnesium symbol)
27	ML	Deleted	(3)	

Term No.	Candidate Term	Action	Deletion Rule	Notes
28	AND	Deleted	(3)	
29	ALPHADOLONE	Saved		
30	ACETATE	Saved		
31	21	Deleted	(2)	
32	ACETOXY	Saved		
33	3ALPHA	Saved		
34	HYDROXY	Saved		
35	5ALPHA	Saved		
36	PREGNANE	Saved		
37	11	Deleted	(2)	
38	20	Deleted	(2)	
39	DIONE	Saved		
40	3	Deleted	(2)	
41	MG	Deleted	(3)	
42	ML	Deleted	(3)	
43	WERE	Deleted	(3)	
44	STUDIED	Saved		

The duplicate occurrences of HYDROXY, PREGNANE, DIONE, MG and ML are carried only as a single occurrence in the postings file, yielding only 20 unique terms out of 44 candidates.

12.6 TOXLINE/TOXBACK COMPONENT SUBFILES DESCRIPTION

A description of each of the TOXLINE/TOXBACK component subfiles follows: The TOXLINE file on-line contains information from secondary sources published from 1974 forward. Older information is in TOXBACK, available through OFFSEARCH only.

12.6.1 TOXICITY BIBLIOGRAPHY (TOXBIB)

This subfile is compiled and published on a quarterly basis by the National Library of Medicine as a subset of MEDLINE which covers approximately 3,000 primary journals. The TOXBIB records incorporated into TOXLINE/TOXBACK (from 1968 to the present) contain citations dealing with the adverse effects, toxicity, or poisoning caused by drugs and chemicals, as well as disease conditions induced by many chemical substances. The bibliographic citations are indexed with terms taken from the Medical Subject Headings (MeSH) vocabulary. However, one should remember that terms in TOXLINE are searched as single terms (uniterms) in a free-text system. Thus, CHROMATOGRAPHY, THIN-LAYER should be searched: (TW) THIN AND LAYER AND ALL CHROMATOG: OR TLC. This method will retrieve from all subfiles in TOXLINE, not just from TOXBIB. At this time, citations in Toxicity Bibliography do not contain CAS Registry Numbers. A typical TOXBIB record in TOXLINE appears as:

SI - TOXBIB/76/236539
AU - Bjondahl K
AU - Isomaa B
TI - The distribution and excretion of hexachlorophene in rats of different ages.
SO - Food Cosmet Toxicol; VOL 14, ISS 3, 1976, P179-82
LA - Eng
JC - F3W

IS - 0015-6264
KW - TOXBIB
KW - Aging
KW - Animal
KW - Brain Stem METABOLISM
KW - Brain *METABOLISM
KW - Cerebellum METABOLISM
KW - Cerebral Cortex METABOLISM
KW - Feces ANALYSIS
KW - Hexachlorophene *METABOLISM
KW - Kidney *METABOLISM
KW - Lethal Dose 50
KW - Liver *METABOLISM
KW - Male
KW - Medulla Oblongata METABOLISM
KW - Organ Specificity
KW - Rats

12.6.2 CHEMICAL-BIOLOGICAL ACTIVITIES (CBAC)

This bi-weekly computer-readable file covers Sections 1-5 of Chemical Abstracts since 1965. In 1975, Sections 62-64 were also added to CBAC. Also in TOXLINE are Section 8 (Radiation Biochemistry), Section 59 (Air Pollution and Industrial Hygiene), and Section 60 (Sewage and Wastes) from 1975. All CBAC records have CAS Registry Numbers. A typical CBAC record in TOXLINE appears as:

SI - CA/087/016671B
AU - Hanig JP
AU - Morrison JM Jr
AU - Darr AG
AU - Krop S
AA - Div. Drug Biol., Food Drug Adm., Washington, DC
TI - Effects of vitamin A on toxicity of hexachlorophene in the rat.
SO - Food Cosmet. Toxicol.; VOL 15, ISS 1, 1977,35-8
LA - Eng
JC - FCTXA
AB - CBAC COPYRIGHT: CHEM ABS Male rats were given Vitamin A acetate orally either daily in a dose of 0, 0.83 or 10.0 mg/kg or every third day at 3 times this dose, 2 weeks before and continuing after daily administration of 50 or 75 mg hexachlorophene (I)/kg (127-47-9 Vitamin A acetate) (70-30-4 Hexachlorophene). At certain levels and regimens, Vitamin A offered partial protection against I toxicity, in that it retarded the rate at which deaths occurred but not the eventual outcome. The highest level of vitamin A (30 mg/kg) given every third day for 2 weeks did not alter significantly the single-dose LD50 of I. Vitamin A deficiency produced by omission of the vitamin from the diet considerably increased the toxicity of I after daily dosing at various levels. Cerebrospinal fluid pressure in Vitamin A-deficient control rats was 88 mm saline compared with 251 mm in I-treated rats. These quant. differences suggest that these 2 factors exert independent and possibly additive effects rather than that vitamin A plays a primary role in the genesis of

I neurotoxicity. Results do indicate, however, that the nutritional status of the animal affects its susceptibility to toxic halogenated hydrocarbons.

RN - 127-47-9; 70-30-4
IT - ADT
IT - ANTIDOTES
DT - LD
DT - LETHAL DOSAGE

12.6.3 PESTICIDES ABSTRACTS (PESTAB)

This monthly publication of the Environmental Protection Agency (EPA) was formerly known as Health Aspects of Pesticides Abstract Bulletin (HAPAB). The name was changed in January, 1974. TOXLINE records contain the abbreviation PESTAB; TOXBACK has the abbreviation HAPAB. Pesticides Abstracts and its predecessor HAPAB contain citations and abstracts covering published reports on the epidemiological effects of pesticides on humans. The publication represents a monthly review and indexing of more than 1000 domestic and foreign primary journals. The TOXBACK HAPAB file has been enriched with CAS Registry Numbers. TOXLINE does not have CAS Registry Numbers for PESTAB from 1974 to the October, 1977 material.

A Pesticides Abstract (PESTAB) record appears in TOXLINE as:

SI - PESTAB/77/1968
AU - Ramakrishna N
AU - Ramachandran BV
TI - Potentiation of malathion toxicity by parathion.
SO - Indian J. Biochem. Biophys. 14(1): 53; 1977.
JC - IJBBB
AB - PESTAB. The very low toxicity of malathion to mammals is due to its facile detoxication in liver by B-type nonspecific carboxylesterases (EC 3.1.1.1). Consequently all other organophosphates which are potential B-esterase inhibitors should be expected to synergize malathion toxicity. Parathion, although a powerful B-esterase inhibitor in vitro, has failed to produce this potentiation. In renewed studies it was concluded that parathion is a potentiator of malathion when administered in sufficient quantity to inhibit B-esterases. This was accomplished in light of the fact that the usual antidotes against organophosphates poisoning, atropine and quaternary oximes, protect only cholinesterases and not B-esterases. Parathion can be administered to animals protected with these compounds at amounts in excess of the LD50, which are sufficient to inhibit the B-esterases. In such animals the LD50 of malathion, normally 600 mg/kg in mice, is reduced to 80-100 mg/kg.

12.6.4 INTERNATIONAL PHARMACEUTICAL ABSTRACTS (IPA)

This file is a product of the American Society of Hospital Pharmacists (ASHP), and has been published since 1964 as an international periodical devoted to all phases in the development and use of drugs. This monthly publication covers more than 1,000 primary journals providing an ever-widening selection of citations and abstracts which reflect new trends and developments in pharmacy. The following categories are also represented in the scope for IPA:

Pharmaceutical Technology, Institutional Pharmacy Practice, Adverse Drug Reactions, Toxicity, Investigational Drugs, Drug Evaluations, Drug Interactions, Biopharmaceutics, Pharmaceutics, Drug Stability, Pharmacology, Preliminary Drug Listing, Pharmaceutical Chemistry, Drug Analysis, Drug Metabolism and Body Distribution, Pharmacognosy, etc.

The IPA records in TOXLINE/TOXBACk begin with 1970 material, since it was in that year that ASHP established its computerized abstracting and indexing system for IPA. IPA records are also enriched with subject index terms as appended terms in the abstract field, or in the Keyword (KW) field which are searchable as textwords (TW). An IPA record appears in TOXLINE as:

SI - IPA/76/06209
AU - Frithz G
AU - Nordgren L
AA - Depts. of Internal Medicine and Clinical Physiology, Univ. Hospital, Uppsala, Sweden
TI - Pindolol and alprenolol in angina pectoris; comparative clinical study.
SO - Curr. Ther. Res. Clin. Exp.: VOL 17 ISS Feb 1975, P133-138, (REF 8)
AB - IPA COPYRIGHT: ASHP Fifteen patients with stable angina pectoris and EEG criteria of coronary insufficiency were selected for a comparative study of the effects of pindolol (I) and alprenolol (II). The study was performed with double blind crossover technique. The effects of the drugs were judged from objective variables during ergometer work but also from subjective symptoms and nitrate consumption. I and II had an equal effect upon the frequency of angina pectoris attacks, nitrate consumption and working capacity. The rate pressure product during exercise was more favorable for II. The potency of I seems to be higher than that of II.
KW - Alprenolol comparison, pindolol
KW - Pindolol comparison, alprenolol
KW - Cardiac drugs alprenolol, comparison, pindolol
KW - Cardiac drugs pindolol, comparison, alprenolol
KW - Dosage alprenolol, comparison, pindolol
KW - Dosage pindolol, comparison, alprenolol

12.6.5 ABSTRACTS ON HEALTH EFFECTS OF ENVIRONMENTAL POLLUTANTS (HEEP)

This file is a compilation of abstracts and reference citations to published papers emphasizing the effects of environmental chemicals or substances, other than medicinals, on human health, initially derived from Biological Abstracts, BioResearch Index, and the National Library of Medicine's MEDLARS (Medical Literature Analysis and Retrieval System) data base. The NLM's Toxicology Information Program contributed to the initial concept and design of this monthly publication and continued to support it for the 3 year contract period. The publication is now comprised of profiles from BIOSIS data bases only. HEEP records in TOXLINE contain abstracts, bibliographic citations and CAS Registry Numbers as shown in the following example from BA:

SI - HEEP/78/01816

AU - NOVAKOVA S

AU - DINOEVA S

AA - Cent. Hyg., Med. Acad., Sofia, Bulg.

TI - The toxicity of dimid in acute and subacute experiments.

SO - KHIG ZDRAVEOPAZ; 19 (1). 1976 55-60

JC - KHZDA

AB - HEEP COPYRIGHT: BIOL ABS. Acute and subacute experiments were performed to examine the toxic action of dimid (N,N-dimethyldiphenylacetamide) in rats. The preparation was slightly toxic; the LD50 was determined at the level of 1250 mg/kg of body weight. It had no durable action on the white and red blood cells; did not impair oxidative-reparative processes; did not damage liver parenchyma; did not affect tissue respiration; and did not cumulate in the organism. The coefficient of accumulation was 21.5.

RN - 957-51-7

A sample HEEP record from the BioResearch Index file is shown below.

SI - HEEP/78/02220

AU - MAHAFFEY KR

TI - Mineral concentrations in animal tissues certain aspects of Federal drug administration regulatory role.

SO - J Anim Sci; 44 (3). 1977 509-515

JC - JANSA

AB - HEEP COPYRIGHT: BIOL ABS. USA IRAQ JAPAN CHICKEN SWINE HUMAN WHO FAO FUNGICIDE MISUSE FLUORIDE MOLYBDENUM MANGANESE MERCURY LEAD CADMIUM ZINC ARSENIC SELENIUM COBALT RETENTION LIVER KIDNEY BONE MINAMATA DISEASE ITAI-ITAI DISEASE CARDIC MYOPATHY GROWTH RATE

RN - 7439-96-5; 7439-92-1

12.6.6 HAYES FILE ON PESTICIDES

This file is a collection of more than 10,000 citations to published articles on the health aspects of pesticides. The file, compiled by Dr. W.J. Hayes, Jr., essentially constitutes the earlier years of HAPAB (1940-1966). The original cards of this file were maintained by EPA in its Atlanta, Georgia offices. The Hayes subfile contains no abstracts or CAS Registry Numbers. A sample HAYES record appears in TOXBACK as:

SI - HAYES/56/03009

AU - DURHAM WF

TI - HORMONAL INFLUENCES ON DDT METABOLISM IN THE WHITE RAT.

LA - ENGLISH

SO - AM. J. PHYSIOL.; 187(2):373-377;1956

12.6.7 ENVIRONMENTAL MUTAGEN INFORMATION CENTER FILE (EMIC)

This subfile was prepared at the Environmental Mutagen Information Center, Oak Ridge National Laboratory, Tennessee (EMIC/ORNL). All EMIC citations appear in the TOXLINE file, even though the time coverage is 1960 to present.

It is a collection of citations, with indexing terms and CAS Registry Numbers. Some abbreviations of secondary sources used in this file are: CA (Chemical Abstracts); BA, BAP, BAC, (Biological Abstracts); BI, BIP, BIC, (BioResearch Index); GA (Genetic Abstracts); CGA (Carcinogenesis Abstracts); CCA (Cancer Chemotherapy Abstracts); TL (Teratology Lookout).

A sample EMIC record appears in TOXLINE as follows:

SI - EMIC/72/018499
TI - SOME ASPECTS OF THE INTERACTION OF CORTICOSTEROIDS AND THE GENETIC APPARATUS OF THE CELL
SO - ALLERG IMMUNOL: 18(3):161-162, 1972; GA 6-2332
LA - GERMAN;ENGLISH SUMM
JC - ALIMC
AB - EMIC/ORNL PREDNISOLONE; MAMMAL, HUMAN; HOMO SAPIENS
RN - 50-24-8

12.6.8 TOXIC MATERIALS INFORMATION CENTER FILE (TMIC)

This subfile was prepared at the Oak Ridge National Laboratory, Oak Ridge, Tennessee (TMIC/ORNL). Most TMIC records appear in TOXBACK, since this is a closed file and the time period covered is primarily 1971-1975.

A sample TMIC record is shown below:

SI - TMIC/74/006594
AU - Rechnita GA
TI - Ion-Selective Membrane Electrodes for Water Pollution Monitoring
SO - Environmental Protection Technology Series EPA 660/2-74-079, 24 p.; 1974, August
AB - TMIC/ORNL Under this project, new ion-selective electrodes were developed for several ions not previously accessible to electrode measurement. In addition, new electrode configurations were constructed and evaluated in terms of suitability for monitoring purposes. Specifically, a liquid membrane electrode for carbonate and a solid membrane electrode for sulfate were devised. The properties of these electrodes were evaluated and found to be useful for measurements in water systems. Both micro and flow-through electrodes for a number of ions were constructed and tested. Particular success in this connection was achieved for sensors responsive to the halide and heavy metal ions. Electrodes were applied to the measurement of NTA in waters and the study of ions association.
KW - ION SELECTIVE ELECTRODES: WATER POLLUTION MONITORING: ANALYTICAL METHODS: CARBONATES; NTA; NITRILOTRIACETATE; CADMIUM; COPPER; LEAD; HALIDES; CHLORIDES; SULFATES; VALINOMYCIN; ELECTROCHEMISTRY; SILVER; IODIDES; SODIUM; POTASSIUM; CALCIUM MAGNESIUM; BROMIDES; DETERGENTS.

• 12.6.9 TERATOLOGY FILE (TERA)

This is a collection of citations on teratology from 1960-1974. It is a closed file and will not grow. A sample record is shown below. Some keywords appear in the title field, between slashes.

SI - TERATO/74/2052

AU - LONGO LD

TI - DISORDERS OF PLACENTAL TRANSFER /REVIEW/.

SO - PATHOPHYSIOL GESTATION 2 1-76 1972

SO - CA 81 23855U 1974

KW - TERA

12.6.10 ENVIRONMENTAL TERATOLOGY INFORMATION CENTER FILE (ETIC)

This file primarily covers the years from 1950 to the present. All of the ETIC citations are in TOXLINE. An example is shown below. It is from the Oak Ridge National Laboratory, Oak Ridge, Tennessee.

SI - ETIC/76/015201

AU - SMITH ESO

AU - DAFOE CS

AU - MILLER JR

AU - BANISTER P

TI - EPIDEMIOLOGICAL STUDY OF CONGENITAL REDUCTION DEFORMITIES OF THE LIMBS

SO - BR J PREV SOC MED; 31:39-41,1977

JC - BJPVA

AB - ETIC/ORNL YEAR ; AGE ; AGE, PATERNAL ; GESTATION DURATION
CONSANGUINITY CANNABIS CONTRACEPTIVES, ORAL
CONTRACEPTIVES, FOAM TRANQUILIZERS ANTIHISTAMINES
ABORTION, THREATENED; HYDRAMINOS; MAMMAL, HUMAN; HOMO SAPIENS;

RN - 8063-14-7

12.7 SPECIAL FEATURES OF SEARCHING TOXLINE

This section covers only some of the special aspects of TOXLINE searching. Users should refer to PART 4 of this manual, ELHILL software, for general data base search instructions, e.g., commands, program messages, logical operators, etc.

12.7.1 SELECTING

The system defaults to the search mode if a command is not entered. Terms to be searched are entered directly into the search statement. Terms may be entered in full or truncated form. However, no term, full or prefix, may be longer than 36 characters. The default in TOXLINE is (TW) textwords. (However, users are encouraged to enter (TW) to avoid ORing together the keyword (KW) field for biological concepts.)

12.7.2 TRUNCATED TERM ENTRY

The truncation symbol for 1 or more characters in ELHILL 3 is the colon (:). Used at the end of a term, it substitutes for any number of characters (including none). The truncated version of a term may result in a multi-meaning message. If 10 or fewer terms begin with the specified root, they will be displayed automatically, and the user may select the terms he wishes to search by entering the number or numbers separated by spaces or commas after the SPECIFY NUMBERS, ALL, OR NONE-- message. He may also select all the terms or none of them by entering ALL or NONE. If more than 10 terms start with the characters specified, the user is asked if he wishes to search ALL OR NONE. For example:

EMBRYO:
MM-MULTI-MEANING (EMBRYO:) - (20) TERMS
ALL OR NONE?

If the user answers ALL, all terms in the index beginning with EMBRYO will be searched. If the user answers none (or N), the search statement is deleted. The user may circumvent the multi-meaning message by entering (TW) ALL EMBRYO: as his entry term. The pound sign (#) may be used anywhere within a term to replace a single character, e.g., (TW) ALL PHENOBARBIT#L. The pound sign is also used to represent only one character or space, i.e. EYE# retrieves EYE or EYES. See PART 4 of this Manual for further discussion of truncation.

Since TOXLINE has an experimental search field of (KW), a user is encouraged to specify Text Words (TW), i.e., (TW) ALL EMBRYO:. (This prevents the computer from "OR"ing together both (TW) and (KW) terms unnecessarily.)

12.7.3 COMBINING

The Boolean operators AND, OR and AND NOT are used as described in PART 3 of this manual. Remember that the AND operator takes precedence over the OR operator. Be careful, and do not use the AND NOT command as you may lose relevant references if the record contains terms you want plus the one term you do not want.

12.7.4 PROGRAM LIMITS

- a) An entry term may not exceed 36 characters. If the term is longer than 36 characters, it must be truncated.
- b) A line may be no more than 72 characters long. If a search statement must be continued on a second or subsequent line, the last entry in each line must be AND or OR. If the line would logically end with a negation, the AND is placed at the end of the line and the NOT at the beginning of the next line.
- c) The total number of terms for 25 search statements may not exceed 380 or 5,800 characters, whichever occurs first. A truncated term or exploded term counts as a single term. However, one must not use explodes in TOXLINE.
- d) The number of terms generated by a truncation or explosion may not exceed 450.
- e) The number of records retrieved by the one search statement may not exceed 114,000.
- f) The number of records processed to execute a single search statement may not exceed 160,000.
- g) The total number of search statements may not exceed 25. To continue past this point, a "RESTACK", "ERASEBACK" or "ERASEALL" must be used.

The violation of any of these conditions generates an error message (See PART 4).

12.7.5 LIMITING

A search statement may be limited to a specific primary year of publication.

The format for limiting a search statement by the year of publication in the primary source is AND YP. For example:

SS 1/C? CARBARYL OR SEVIN OR 63-25-2 OR NAPHTHYL AND METHYLCARBAMATE
SS 2/C? 1 AND 77

The primary journal year is NOT rangeable. If one wanted papers published in either 1977 or 1976, for search statement one, a user would enter

1 AND 77 or 1 AND 76

One can also limit a search to a single TOXLINE file by ANDing the search statement with the file mnemonic.

1 AND TOXBIB
1 AND PESTAB

The following file mnemonics may be used in limiting search statements: CBAC, HAPAB, TOXBIB, IPA, HEEP, PESTAB (for material in HAPAB starting January 1974), EMIC, ETIC, TMIC and TERA. It is not possible to limit retrieval to the Hayes file. (Note: HAPAB, TMIC, TERA, HAYES are in TOXBACK only.)

One can limit a search to a specific update in TOXLINE by using the Source and Time Frame field. The format for limiting a search to a specific update is AND YYMM (ST) where YYMM is the year and month. For example:

SS 1/C? 143-50-0 OR KEPONE OR MEREX OR DECACHLOROKETONE
SS 2/C? 1 AND 7802

One could limit a search to review articles by "AND"ing the term with ALL : REVIEW# (TW) to pick up the singular and/or plural of review.

12.7.6 STRINGSEARCH

Once a preliminary search has been done and a set of citations retrieved, a field in those unit records may be scanned for a specific character string. The format of STRINGSEARCH is:

<u>STRING- SEARCH</u>	<u>Search Statement No.</u>	<u>Field Identifier</u>	<u>:String to be Searched:</u>
TS	8	(TI)	:BARBIT:

The search statement number may be omitted if the stringsearch is to be performed on the last entered search statement. The field identifier may be omitted; STRINGSEARCH defaults to the abstract (AB) field in TOXLINE.

Note that STRINGSEARCH operates on a limited number of records at a time. After these records have been scanned, postings are given, and the system asks the user if he wishes to continue. The oldest records are scanned first.

Character strings to be searched may be ANDed or ORed together. For example:

SS 1 (TW) ALL VITAMIN:

SS 2 TS 1 (TI) :VITAMIN A: OR :VITAMIN A: (AB) OR :VITAMIN A: (KW)

If STRINGSEARCH is to operate on more than one field, the first field identifier precedes the string and remains in force until overridden by a second field identifier, which follows a string. For example:

TS 8 (TI) :PLATINUM: AND :CATALYSIS: OR :PLATINUM: (AB) AND :CATALYSIS: (AB)

STRINGSEARCH counts as a numbered search statement. Its results may be ANDed or ORed with other terms or search statements.

If a user wishes to scan only the most recent records, the SKIP may be used, as follows:

TS 1 SKIP 300 (TI) :VITAMIN A:

The word SKIP and its argument are entered after a search statement number, but before the category qualifier. (If it were entered after the category qualifier, the system would try to search on the words SKIP 300.) If defaults are used, the SKIP comes after TS and before the field to be searched, e.g.

TS SKIP 300 :VITAMIN A:

Note the default is to the ABSTRACT (AB) field in TOXLINE.

12.7.7 SENSEARCH

The delimiter for SENSEARCH is a period followed by a space. Therefore, all abbreviations with periods create an artificial sentence. For this reason SENSEARCH is not recommended in TOXLINE.

12.8 TOXLINE PRINT COMMANDS

12.8.1 STANDARD PRINT COMMANDS

The three standard forms of the PRINT command, which cause citations to be printed online, are:

PRINT or PRT
PRINT FULL or PRT FU
PRINT DETAILED or PRT DL

PRINT causes the system to print online the secondary source ID, author(s), title and source. PRINT FULL causes the system to print online the secondary source ID, author(s), title, source and abstract. PRINT DETAILED causes the system to print online the entire unit record. All PRINT commands display 25 lines plus the number of lines needed to complete the citation being printed at the 25th line unless you explicitly ask for fewer unit records.

The standard forms of the offline PRINT command are:

PRINT OFFLINE or PRT OFFLINE
PRINT FULL OFFLINE or PRT FU OFFLINE
PRINT DETAILED OFFLINE or PRT DL OFFLINE

PRINT OFFLINE causes the system to print offline the source ID, author(s), title and source of up to 300 citations. PRINT FULL OFFLINE causes the system to print offline the unit record described above, up to 300 citations. PRINT DETAILED OFFLINE causes the entire record to be printed offline, up to 300 documents. When a PRINT OFFLINE command is issued, the system will prompt for the name and address of the user, the name of the requester, and the title of the search, etc.

If the user notices an error in this information after he has struck the carriage return, he may abort the offline print request by pressing the space bar and carriage return immediately after a USER cue. The program will respond with the search statement number, and the user may reenter his "PRINT OFFLINE command. The user may also correct the error by specifying the line and entering the correct information. For example, NAME=JANE DOE. When all the mailing information has been entered, the program asks OK? (YES/NO/CANCEL). If the user replies NO, he is prompted with the questions again. If he replies YES, he will receive the message: OFFLINE PRINT COMPLETED. If the user replies CANCEL, the program responds with OFFLINE PRINT COMMAND HAS BEEN CANCELLED and returns the user to SS # /C?

12.8.2 TAILORED PRINT COMMANDS

Tailored PRINT commands allow the user to specify which and how many citations are to be printed and which fields are to be included or excluded. They can be used to format output both online and offline. The options can be specified in any order, separated by commas and a space. The general form of the tailored PRINT commands is:

PRINT or PRT
PRINT OFFLINE or PRT OFFLINE

Some of the possible variations of tailored PRINT commands are shown below.

PRINT 5 TI, SI

This causes only the titles and secondary sources of five of the documents to be printed online, for browsing. This way a user knows which subfile the information is from, how recent, etc.

PRINT 10

This command will cause 10 citations to be printed online with secondary source ID, author(s) title and source. After each group of citations, the program will ask: CONTINUE PRINTING? (YES/NO)

PRINT AU, AA, TI, SO, RN, AB, OFFLINE

This command requests that these fields of the last search statement be printed offline. The fields must be specified with each PRINT command, if other than standard options are desired.

PRINT SKIP 5

This command specifies that citations starting with number 6 be printed online.

PRINT SS 3, SS 7, SS 9, OFFLINE

This command requests that only citations retrieved from the three search statements indicated be printed offline. In the offline print, the citations from each search statement will be separated. If field identifiers are specified in this type of PRINT command, they must be the same for all search statements, e.g.: PRINT AU, TI, SO, RN, SS 3, SS 7, SS 9, OFFLINE. The maximum number of citations which can be printed in one PRINT OFFLINE command is 300. The same search title will appear on each page of the OFFLINE print.

12.9 SAMPLE SEARCH

Sample (non-exhaustive) CHEMLINE/TOXLINE search on the effect of Dimethyl Sulfoxide on the eye. The searcher should also consider other "eye" terms, such as lens, retina, optic, etc. (Also note various print options)

USER:

FILE CHEMLINE

PROG:

YOU ARE NOW CONNECTED TO THE CHEMLINE FILE.

SS 1 /C?

USER:

DIMETHYL SULFOXIDE

PROG:

SS (1) PSTG (1)

SS 2 /C?

USER:

PRT DL INDENTED

PROG:

1

CAS REGISTRY NO

OTHER CAS REG NO

MOLECULAR FORMULA

CAS TYPE1 NAME

67-68-5

SEE ALSO: 8070-53-9

C2-H6-O-S

Methyl sulfoxide (8CI)

CAS	TYPE1	NAME
SYNOMYS		Methane, sulfinylbis- (9CI)
SYNOMYS		SQ 9453
SYNOMYS		DMSO
SYNOMYS		Dromisol
SYNOMYS		Dimethyl sulphoxide
SYNOMYS		Dimexide
SYNOMYS		Sulfinylbismethane
SYNOMYS		Dimethyl sulfoxide
SYNOMYS		Dolicur
SYNOMYS		DMS 70
SYNOMYS		DMS 90
SYNOMYS		Hyadur
SYNOMYS		Somipront
SYNOMYS		Infiltrina
SYNOMYS		Dipiratril-tropico
SYNOMYS		Demsodrox
SYNOMYS		Durasorb
WISWESSER LINE NOTATION		OSI&1
LOCATOR		TOXLINE
LOCATOR		EPATSCALIST
R CODE		R006-2719

SS 2 /C?

USER:

FILE TOXLINE

PROG:

YOU ARE NOW CONNECTED TO THE TOXLINE FILE.

SS 1 /C?

USER:

67-68-5 OR DMSO OR DROMISOL OR SQ-9453 OR DIMEXIDE OR DIMETHYL AND SULFOXIDE

PROG:

NP (DROMISOL)

NP (SQ-9453)

SS (1) PSTG (977)

SS 2 /C?

USER:

(TW) ALL EYE# OR ALL CORNEA# OR ALL CATARACT:
PP22

PROG:

SS (2) PSTG (3853)

SS 3 /C?

USER:
LAND

1 AND 2
PPG9

PROG:

SS (3) PSTG (20)

SS 4 /C?
USER

USER:

PRT 3
BBG

PROG:

1

AU - Laillier J
AU - Plazonnet B
AU - Le Douarec JC
AU - Gonin MJ

TI - Evaluation of ocular irritation in the rabbit: Development of an Objective Method of Studying Eye Irritation.

SI - CA/087/161535Q

SO - Proc. Eur. Soc. Toxicol.; VOL 17, ISS Predict. Chronic Toxic. Short Term Stud., Proc. Meet., 1975, 1976, 336-50

2

AU - Mollet P

TI - Lack of Proof of Induction of Somatic Recombination and Mutation in Drosophila by Methyl-2-Benzimidazole Carbamate, Dimethyl Sulfoxide and Acetic Acid.

SI - TOXBIB/77/100078

SO - Mutat Res; VOL 40, ISS 4, 1976, P383-7

3

AU - Conquet P

AU - Durand G

AU - Laillier J

AU - Plazonnet B

TI - Evaluation of Ocular Irritation in the Rabbit. Objective versus Subjective Assessment.

SI - CA/086/115698B

SO - TOXICOL. Appl. Pharmacol.; VOL 39, ISS 1, 1977, 129-39

SS 4 /C?

USER:

PRT 3 SI, TI SKIP 3

PROG:

4

SI - CA/085/172383Y

TI - Toxicity of DMSO to Bovine Corneal Endothelium.

5

SI - CA/085/172228B

TI - Study of Combined Action of Dimexide and Antibiotics on Microorganisms isolated from the Conjunctiva of Patients with Inflammatory Diseases of Anterior Chamber of the Eye.

6

SI - HEEP/77/10180

TI - Evaluation of Ocular Irritation in the Rabbit: Objective versus Subjective Assessment.

SS 4 /C?

USER:

PRT 1 DL SKIP 5

PROG:

SI - HEEP/77/10180

AU - Conquet P

AU - Durand G

AU - Laillier J

AU - Plazonnet B

AA - MSD Chibret Res. Inst., 63018 Clermont Ferrand Cedex, Fr.

TI - Evaluation of Ocular Irritation in the Rabbit: Objective versus Subjective Assessment.

SO - TOXICOL APPL PHARMACOL: 39 (1). 1977 129-139

JC - TXAPA

AB - HEEP COPYRIGHT: BIOL ABS. There are several methods for assessing ocular irritation in laboratory animals. The most common method is that of Draize, but an objective evaluation of tissue changes, such as corneal and conjunctival edema, and conjunctival and ciliary body capillary disruption may also be used. The present investigation compares the subjective Draize score to several objective procedures, i.e., corneal thickness measurement, evaluation of corneal and conjunctival water content and conjunctival and aqueous humor concentrations of a dye bound to plasma proteins after I.V. infection. The following 7 organic solvents were tested: tetrahydrofurfuryl alcohol, N-Methylformamide, Solketal, Carbitol, Dimethyl Sulfoxide, Propylene Glycol and Triacetin. After a single instillation of 100 µl of undiluted compound in the rabbit eye, evaluation of the above parameters was made at 2 and 24 h. Draize score and corneal thickness were further determined daily for 10 additional days. A linear correlation was found between Draize total score and tissue changes. This was due mainly to the highly significant correlation between conjunctival Draize score and conjunctival edema and capillary permeability. There was a significant correlation between Draize corneal score and corneal edema or thickness only on day 1. No relationships were shown between iris hyperemia and Evans blue dye diffusion into the aqueous humor following I.V. injection. Minor corneal damage was difficult to assess with the Draize system, and corneal thickness determination appeared to be helpful to this purpose. In addition to the standard Draize method, corneal thickness measurements should be performed. Both subjective and objective procedures ranked the compounds' irritant potential in the same order.

RN - 123-39-7; 111-90-9; 102-76-1; 100-79-8; 97-99-4; 67-68-5; 57-55-6

12.10 TOXBACK (TOXLINE BACKFILE)

The TOXLINE backfile, TOXBACK, contains documents published in secondary sources prior to 1974. At present, TOXBACK contains approximately 380,000 documents, from the various subfiles, described under TOXLINE.

TOXBACK is available at NLM, by OFFSEARCH only, at the present time. OFFSEARCHing is described in a separate section of this manual. TOXBACK OFFSEARCHES are processed evenings at NLM, and mailed the next morning. DO NOT use the FROM...TO... (ranging) in TOXBACK.

See sample OFFSEARCH, where TOXLINE and TOXBACK are both searched with the same strategy, inputting the search formulation only once.

2.11 SAMPLE OFFSEARCH OF TOXLINE AND TOXBACK

PROG:

YOU ARE NOW CONNECTED TO THE TOXLINE FILE

NOTES:

SS 1 /C?

USER:

OFFSEARCH

- 1) User decides to do OFFSEARCH; will want both TOXLINE and TOXBACK files.

PROG:

TASKNAME = S1151401

ON-LINE OUTPUT:--NPS/PSTG/NONE?

USER:

PSTG

- 2) User selects PSTG option to see retrieval of current file to which he is connected.

PROG:

FILES?

- 3) User selects which authorized files are to be searched with same strategy.

PROG:

PRINTSPECs?

- 4) User decides what print-out option wanted, e.g., DETAILED (SD for standard, FU for full, DL for detailed)

PROG:

PRINT ELEMENTS, IF ANY WILL BE EVALUATED AGAINST THE TOXLINE FILE
OK? (Y/N/C)

USER:

Y

- 5) *STS* denotes search statement, OFFSEARCH mode. User enters Search Statements.

PROG:
ENTER SEARCH-

STS SS 1 /C?

USER:

67-68-5 OR DMSO OR DROMISOL OR DIMETHYL AND SULFOXIDE

PROG:
NP (DROMISOL)
SS (1) PSTG (977)

- 6) These postings are for TOXLINE only.

STS SS 2 /C?

USER:

(TW) ALL EYE# OR ALL CORNEA# OR ALL CATARACT:

PROG:

SS (2) PSTG (3853)

STS SS 3 /C?

USER:

1 AND 2

PROG:

SS (3) PSTG (20)

STS SS 4 /C?

USER:

PRT 5 SI, TI

PROG:

7) User prints documents to test
Search Strategy and Retrieval from
TOXLINE.

1

SI - CA/087/161535Q

TI - Evaluation of ocular irritation in the rabbit: Development
of an objective method of studying eye irritation.

2

SI - TOXBIB/77/100078

TI - Lack of proof of induction of somatic recombination and
mutation in drosophila by methyl-2-benzimidazole
carbamate, dimethyl sulfoxide and acetic acid.

3

SI - CA/086/115698B

TI - Evaluation of ocular irritation in the rabbit: Objective
versus subjective assessment.

4

SI - CA/085/172383Y

TI - Toxicity of DMSO to bovine corneal endothelium.

5

SI - CA/085/172228B

TI - Study of combined action of dimexide and antibiotics on
microorganisms isolated from the conjunctiva of patients with
inflammatory diseases of anterior chamber of the eye.

STS SS 4 /C?

USER:

FINISHED

PROG:

SSNOS-OVRIDES?

8) User does not wish to modify
strategy further.

USER:

3

PROG:

SEARCH TITLE, OR NONE-

9) User selects search statement
number(s) (up to 5 search statements)
from which offline prints are wanted,
separated by commas.

USER:
DIMETHYLSULFOXIDE AND EYE
PROG:
NAME?

10) User enters Name, Address, etc.
where print-outs are to be mailed.

USER:
DR. SHARON L. VALLEY 301 496-1131

PROG:
ADDRESS?

USER:
NATL. LIB. MEDICINE 8600 ROCKVILLE PIKE, ROOM C6B

PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP-

USER:
BETHESDA MARYLAND 20014

PROG:
REQUESTER'S NAME, OR SAME -

USER:
SAMPLE SEARCH - OFFSEARCH OF TOXLINE/TOXBACK

PROG:
OFFSEARCH COMPLETED

11) OFFSEARCH completed. User is
returned to normal online
searching mode; search history
is still saved. Printouts from
TOXLINE and TOXBACK will be
mailed to user.

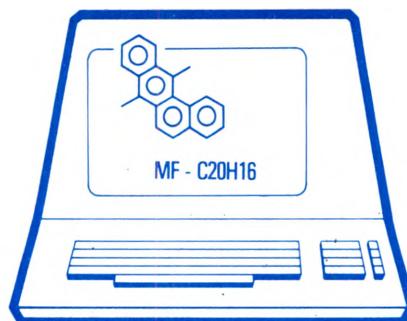
SS 4/C?
USER:
DIAGRAM
PROG:

12) DIAGRAM performed to keep
record of search strategy.

SEARCH FORMULATION BEGINNING AT SS 3 :
(SS 1:
(67-68-5 OR DMSO OR DROMISOL OR DIMETHYL AND SULFOXIDE)
AND SS 2:
(ALL EYE# (TW) OR ALL CORNEA# (TW) OR ALL CARARACT: (TW))

NO SUBHEADINGS APPLIED TO ANY SEARCH STATEMENT.

SS 4 /C?
USER:



CHEMLINE

CHEMICAL DICTIONARY ONLINE

CONDENSED

NATIONAL LIBRARY OF MEDICINE
SPECIALIZED INFORMATION SERVICES
TOXICOLOGY INFORMATION PROGRAM

Bethesda, Maryland 20209

EMLINE
DEFINED

CHEMLINE (CHEMical Dictionary onLINE) is the National Library of Medicine's online, interactive chemical dictionary file created by the Specialized Information Services in collaboration with Chemical Abstracts Service (CAS). It provides a mechanism whereby over 484,000 chemical substances can be searched and retrieved online. This file contains CAS Registry Numbers molecular formulas; CA chemical index nomenclature; generic and trivial names; and a locator designation that points to other files in the NLM system containing information on that particular chemical substance. In addition, where applicable, each CAS Registry Number record in CHEMLINE contains ring information including: number of component rings within a ring system, ring sizes, ring elemental compositions, and component line formulas.

EMLINE
ACCESSED

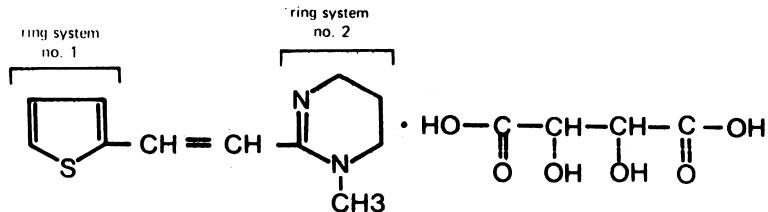
CHEMLINE is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland. The communications linkage is provided by nation-wide networks using telephone lines and small computers with access nodes located in many cities.

EMLINE
SEARCHED

The user searches CHEMLINE by entering a chemical name, generic name, trivial name, company identification name, or a molecular formula. If the exact name of a chemical substance is unknown, a search may be conducted using name fragments, formula fragments, and/or ring analysis terms. This feature also allows searching at a substructure level. Any one of the following data elements would retrieve information about the chemical pyrantel tartrate.

Synonyms:	BANMINTH; CP 10423-18; PYRANTEL TARTRATE; PYREQUAN TARTRATE
Chemical Name:	PYRIMIDINE, 1,4,5,6-TETRAHYDRO-1-METHYL-2-(2-(2-THIENYL)ETHENYL)-, (E)-, (R-(R*,R*))-2,3-DIHYDROXYBUTANEDIOATE (1:1) (9CI)
Name Fragments:	PYRIMIDINE; 1,4,5,6; TETRAHYDRO; 1; METHYL; 2; THIENYL; ETHENYL; E; R; R*,R; 2,3; DIHYDROXYBUTANEDIOATE; 9CI
Molecular Formula:	C11-H14-N2-S.C4-H6-O6
CAS Registry Number:	33401-94-4

From the structure of pyrantel tartrate,



it can be seen to have two unique ring systems. Ring system #1 has one component ring with five atoms and an elemental analysis of C4S. Ring system #2 has one component ring with six atoms and an elemental analysis of C4N2. The component line formula, NCNC3, describes the order of arrangement of the atoms within ring system #2. Therefore, the ring information data elements for pyrantel tartrate are:

Number of Rings: 1 ; 1
Ring Size: 5 ; 6
Elemental Composition: C4S ; C4N2
Component Line Formula: NCNC3

**LINE
ABILITY**

CHEMLINE is available at NLM Monday, Wednesday, and Thursday from 3:00 a.m. to 8:00 p.m., and Tuesday and Friday from 3:00 a.m. to 9:00 p.m., and Saturday from 9:00 a.m. to 5:00 p.m. (Eastern Time)

LINE

The cost of access to the CHEMLINE file is \$59 per hour during prime time (10:00 a.m. to 5:00 p.m.), and \$52 per hour at all other times. There is a charge of \$.22 per page for offline printouts.

**LINE
SERVICES**

For Online Systems services including access to the CHEMLINE file contact:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-6193

For CHEMLINE content including search strategies contact:

Specialized Information Services
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-1131

CHEMLINE

13.1 INTRODUCTION

CHEMLINE is an on-line chemical dictionary file which provides a mechanism to search and retrieve chemical substance names or name surrogates. It primarily contains records for chemicals which are identified by Chemical Abstracts Service (CAS) Registry Numbers in the TOXLINE, TOXBACK, RTECS, and TDB data bases, as well as the FDA-NDA file. At present, CHEMLINE contains data and information for over 362,000 chemical compounds, including CAS Registry Numbers, molecular formulas, preferred chemical nomenclature, synonyms, various nomenclatural and structural fragments, locator designations, ring information, and, for a limited number of records, MeSH Headings. In a search involving chemicals, a user should always search CHEMLINE before searching TOXLINE or other NLM data base in order to find the various names by which a chemical substance may be identified as well as the CAS Registry Number.

13.2 GENERAL ASSISTANCE TELEPHONE NUMBER

The telephone number for questions on system and communication problems, program interpretation, etc., is (301) 496-6193. The telephone number for technical assistance in CHEMLINE search strategy, etc., is (301) 496-1131.

13.3 LOGIN PROCEDURE

CHEMLINE can be accessed from any ELHILL data base by executing the command FILE CHEMLINE; for general login procedures, see PART 3 of the On-Line Services Reference Manual.

13.4 CHEMLINE UNIT RECORD

The CHEMLINE unit record currently consists of seventeen data elements, each of which is identified in ELHILL by a two character mnemonic. Each element may be either searchable, printable, or both. The table on the following page indicates the basic characteristics of the available data elements.

The ELHILL programs serving CHEMLINE only use the first 39 characters of a search term. However, the user need not count and truncate; the system truncates automatically. Since many chemical names are identical through the first 39 characters, the searcher will receive postings to all records in which that field matches up to that point. Those fields which are likely to contain alphanumeric strings longer than 39 characters are indicated in the following table by an asterisk (*).

TABLE OF SEARCHABLE AND PRINTABLE DATA ELEMENTS

PRINT OPTIONS

	Abbrev.	Directly Searchable	Print	Print Full	Print Data
CAS Registry Number	RN	YES	X	X	
Other Registry Number(s)	ON	YES	X	X	
Molecular Formula	MF	YES	—	—	X
Molecular Formula Fragments	FF	YES	—	—	—
CA Type 1 Name*	N1	YES	—	X	
Synonyms*	SY	YES	X	X	
Name Fragments	NF	YES	—	—	—
Number of Rings	NR	YES	—	—	X
Ring Size	RS	YES	—	—	X
Ring Size Fragments	SF	YES	—	—	—
Ring Elemental Analysis	RE	YES	—	—	X
Ring Elemental Analysis Fragments	EF	YES	—	—	—
Component Line Formula	CL	YES	—	—	X
Component Line Formula Fragments	CF	YES	—	—	—
MeSH Headings*	MH	YES	X	X	X
Heading Fragments	HF	YES	—	—	—
Locator	LO	YES	X	X	X

CHEMLINE Unit Record Description:

13.4.1 CHEMICAL ABSTRACTS SERVICE (CAS) REGISTRY NUMBER (RN)

The CAS Registry Number is a unique number used to identify a single chemical substance. CAS numbers in CHEMLINE are searched and displayed in a hyphenated format without leading zeros. Therefore, the number 486862 must be searched and would be displayed as 486-86-2. Each CAS Registry Number represents only one substance insofar as that substance has been elucidated and defined in the chemical literature in terms of atoms, bonds, and stereo-chemistry.

13.4.2 OTHER CAS REGISTRY NUMBER (ON)

The ON field contains any alternate CAS Registry Numbers which are cross-referred to the current Registry Number (RN) for a given substance. The individual ON Registry Numbers are followed by file names leading to other NLM files (TOXLINE, TOXBACK, MEDLARS, RTECS, TDB) or to government files external to NLM (FDA-NDA) in the same fashion that the LO field qualifies the RN field. An ON Registry Number with the file name (CAS) indicates that the Number is cross-referred in the CAS Chemical Registry system to the RN number, but does not appear in any NLM files unless the ON is repeated with an NLM file designation.

For example, the command PRT RN, ON, for the compound alpha-chlordane gives the following record:

RN - 5103-71-9
ON - 22212-52-8 (CAS)
ON - 26703-86-6 (CAS)
ON - 28140-46-7 (CAS)
ON - 22212-52-8 (TOXLINE)(TOXBACK)

The four ON Registry Numbers were previously assigned to this substance and have since been cross-referred to the RN Registry Number 5103-71-9. Each ON is followed by one or more file names in parentheses. Those numbers designated (CAS) were previously listed in CHEMLINE as SEE ALSO, and may be useful when utilizing other sources which contain CAS Registry Numbers. Those followed by an NLM file name in parenthesis such as 22212-52-8 (TOXLINE)(TOXBACK) are present in the NLM file(s) specified. Using this information, the searcher may pick ON Registry Numbers appropriate to the data base to be searched.

File names qualifying ON numbers are not searchable in the ON field. With the exception of (CAS), they are added to the Locator Field (LO) to be made searchable. The LO Field thus qualifies both the RN and ON Registry Numbers. Section 13.4.17 discusses the effect of this.

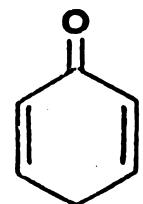
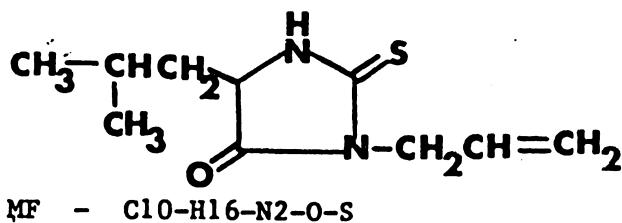
Alternate CAS Registry Numbers arise for two major reasons: (1) a naturally occurring or commercial substance may be assigned a Registry Number before complete information on the specific structure is available; subsequently, when the structure is fully elucidated another "more preferred" Registry Number may be found to have been assigned previously to the same structure; (2) there are compounds for which different but closely related chemical structures (e.g., tautomeric forms) have been used interchangeably in the scientific literature, thereby resulting in the creation of additional cross-referred numbers for the different structural forms in the CAS Registry System.

For searching purposes, ON numbers are carried as RN in the Index and Posting files. Thus searching (and Neighboring) for Registry Numbers does not require qualification by RN or ON since these both are converted to RN, and in fact this is not recommended. Because RN and ON are both useful in searching other databases, they are printed together in all standard CHEMLINE print commands (PRT, PRT FULL, PRT DL). In tailored prints to obtain data useful for further searching, the user should always print ON when printing RN.

3.4.3 MOLECULAR FORMULA (MF)*

The Molecular Formula represents the elemental composition of a chemical substance in terms of the number and kinds of atoms contained in its structure. The Molecular Formula in CHEMLINE is expressed in the Hill convention, as given below:

a. For organic (carbon-containing) compounds, the number of carbon atoms is given first, followed by the number of hydrogen atoms, if present, and then the remaining elemental symbols in alphabetical order. Thus, the Molecular Formula field for the following compounds would be:



*For assistance in calculating molecular formulas, see section 13.7 on Calculating Molecular Formulas.

As can be seen in the previous examples, there is no numerical count given for the single occurrence of an atom in the Molecular Formula field.

b. For inorganic (non-carbon containing) compounds, the elemental symbols are given strictly in alphabetical order. The MF field for Aluminum Oxide is:

MF - AL2-O3

The Molecular Formula field of CHEMLINE also incorporates the dot-disconnect convention of CAS. For salts, mixtures and molecular addition compounds, the molecular formulas of the components are presented individually and are separated with a dot or period. In general, the individual components of a parent/salt or mixture are given in the Molecular Formula field in order of descending carbon atom count. In addition, the component ratios for these compounds are given, when known. A lower case x- preceding the second and any subsequent formulas in the Molecular Formula field indicates that the ratio is unknown. Examples of such substances are:

CLOTHIXAMIDE MALEATE
MF - C24-H28-CL-N3-O-S.2C4-H4-O4

IFENPRODIL TARTRATE
MF - C21-H27-N-02.x-C4-H6-O6

DICLOXA CILLIN SODIUM
MF - C19-H17-CL2-N3-05-S.H2-O.Na

13.4.4 MOLECULAR FORMULA FRAGMENTS (FF)

The individual chemical elements of the CHEMLINE Molecular Formula field, with the exception of hydrogen, are searchable through the use of the Formula Fragment (FF) mnemonic. Formula Fragments are generated from the Molecular Formula field by breaking on hyphens and dots and saving the individual atoms (excluding hydrogen) with their numerical counts.

For the hetero atoms (nitrogen, oxygen, phosphorus, and sulfur), and the halogens (fluorine, chlorine, bromine, and iodine), a special generic formula fragment is created for the element in addition to a formula fragment for the element with its actual count. This feature permits the user to search generically for the presence of any (unspecified) number of hetero or halogen atoms in a chemical compound, or for a specific number of these atoms.

Accordingly, the formula fragments derived from the Molecular Formula of the chemical substance ICR 342 would be as follows:

(MF) C19-H20-CL2-N2-O-S.CL-H

(FF) C19 CL2 N2 O1 S1 CL1
 CL N O S

Note that the generic Formula Fragment CL is not repeated for both occurrences of the chlorine atom (CL2 and CL1) and that the Formula Fragment field is not additive (CL2 and CL1 does not give a CL3 Formula Fragment count). Also, single occurrences of non-hydrogen elements in the MF field are assigned a value of one in the FF field.

13.4.5 CHEMICAL ABSTRACTS PREFERRED INDEX NAMES OR TYPE 1 NAMES (N1)

This field contains the preferred index names which are usually the systematic names used in the Chemical Substance and Formula Indexes of CA. Each chemical substance is assigned an index name according to established CA nomenclature policies. Since the CHEMLINE file contains chemical compounds discussed in the scientific literature since 1965, it includes nomenclature from two CA collective indexing periods; the Eighth Collective Index (8CI) Period (1967-71) and the Ninth Collective Index (9CI) Period (1972-76). Consequently, the CHEMLINE unit record will frequently have two occurrences of the N1 field, with the 8CI and 9CI designations, respectively, to reflect the nomenclature of these two indexing periods.

The general nomenclature policy followed by CA for the Eighth Collective Period is discussed in the Introduction to CA Volume 66 Subject Index. An extensive section in the 1977 CA Index Guide describes in detail the rules employed for naming chemical substances starting with the Ninth Collective Period.

CHEMLINE contains names which carry the (8CI) (9CI) designation. This indicates there was no change in nomenclature rules for these substances. There are some N1 names which carry no Collective designation. This indicates that the substance name was derived according to nomenclature rules prior to 1967. The difference between 8CI and 9CI index names for the same chemical compound can be seen in the following examples:

N1 - C.I. Basic Red 5, monohydrochloride (8CI) (VAN)

N1 - 2,8-Phenazinediamine, N(8),N(8),3-trimethyl-, monohydrochloride (9CI)

N1 - Aniline (8CI)

N1 - Benzenamine (9CI)

The designation (VAN) stands for Valid Ambiguous Name, and is assigned by CAS to names which are not fully systematic and have been used to identify more than one compound. This qualification may follow certain names in the N1 and SY fields.

13.4.6 OTHER CHEMICAL NAMES (SYNONYMS) (SY)

This field contains names which are synonyms for the name(s) in the N1 field of the same record. These names include generic, trivial, trade, and experimental substance names, as well as other systematic names which have been encountered by CAS in processing substances reported in the scientific literature or special data collections.

13.4.7 NAME FRAGMENTS (NF)

All meaningful parts of common and chemical names, including parent, substituents, modifiers and locants, are individually or collectively searchable in CHEMLINE as name fragments. The feature allows on-line, interactive nomenclatural substructure searching of this chemical file.

Name fragments are derived from both the N1 and SY fields by breaking a name on hyphens, colons, enclosures (i.e., parentheses, brackets, etc.) and blanks. The uniquely occurring character strings are then saved as name fragments and then stored in the alphabetical index. When special characters (non-alphanumerics) are preceded or followed by a space in a name, these characters are successively converted to spaces along with the aforementioned break characters. Accordingly, the 9CI systematic name for Chlorpromazine Hydrochloride and its name fragments are as follows:

N1 - 1OH-Phenothiazine-10-propanamine, 2-chloro-N,N-dimethyl-, monohydrochloride (9CI)

NF -	10H	chloro
	Phenothiazine	N,N
10		dimethyl
propanamine		monohydrochloride
2		9CI

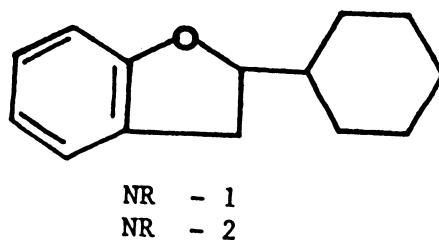
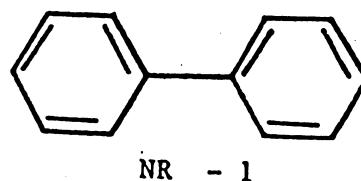
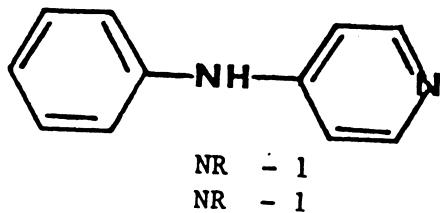
Note that the comma following propanamine is converted to a space according to the rule given on the preceding page and therefore does not appear as part of the name fragment.

RING INFORMATION

Many organic compounds contain ring systems as part of their overall molecular structure, and over 80% of the substances in CHEMLINE contain at least one ring. Consequently, information describing the analysis of ring systems is important to the user. The basic components of ring analysis consist of (1) number of rings; (2) ring sizes; (3) ring elemental analysis; and (4) component line formula.

13.4.8 NUMBER OF RINGS (NR)

This element indicates the number of component rings within each unique ring system in a chemical substance. There is a NR count for each different ring system in a chemical record, as seen in the examples below:

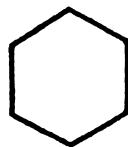


Notice that the two rings in the second compound (upper right) are identical. Therefore, the NR-1 is not repeated.

13.4.9 RING SIZE (RS)

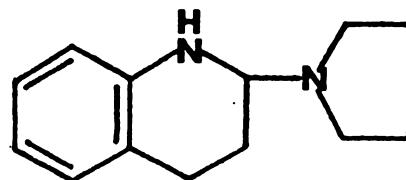
This field gives the size of the component rings within each unique ring system. For ring systems containing more than one component ring, the individual ring sizes are cited in order, from smallest to largest, and are separated by commas. Several examples of ring systems and their RS designations are provided below:

(A)



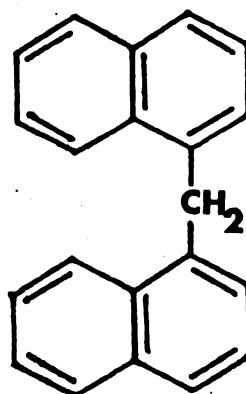
RS - 6

(B)



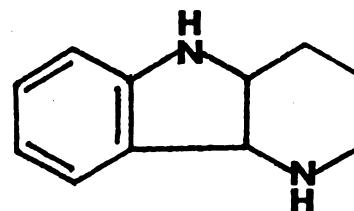
RS - 5
RS - 6,6

(C)



RS - 6,6

(D)



RS - 5,6,6

13.4.10 RING ELEMENTAL ANALYSIS (RE)

The RE field gives the molecular formula, excluding hydrogen atoms, for each component ring within a unique ring system. This element count begins with carbon and all other elements follow in alphabetical order.

For a multiple ring system, the Ring Elemental Analysis is given first in order of ring size and then in ascending order of the carbon atom count for individual rings when ring sizes are equal. The RE fields for the structural diagrams in the previous section (Ring Size) are listed below:

(A) RE - C6
(B) RE - C5N-C6
RE - C4N

(C) RE - C6-C6
(D) RE - C4N-C5N-C6

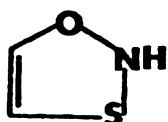
It should be noted that there is a 1:1 relationship between the number of RE designations for a chemical substance and the number of NR and RS designations. This can be observed in the Ring Analysis data for Compound B. Also, there is a separate RE field for each unique ring system (see compound B).

13.4.11 COMPONENT LINE FORMULA (CL)

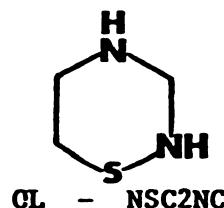
This field exists for any ring (containing between 4 and 8 atoms) which contains two or more non-carbon atoms. The rules for generating a Component Line Formula for a ring are as follows:

- A. Start at the earliest alphabetic non-carbon atom.
- B. Proceed around the ring in the direction that provides the shortest path to the next non-carbon atom.
- C. If equal alternatives exist, select the path that provides the earliest alphabetic sequence of atoms.
- D. Where contiguous atoms repeat, give only the atom and its number of occurrences.

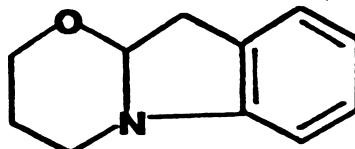
The Component Line Formulas for several rings are provided below to demonstrate the application of the preceding rules.



CL - NOC2S

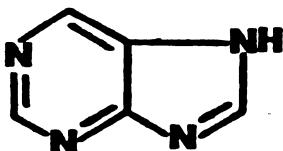


CL - NSC2NC

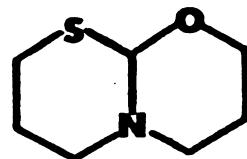


CL - NCOC3

When two or more rings within a single ring system qualify for generation of Component Line Formulas, these are designated within a single CL field and are separated by periods. The individual Component Line Formulas are given in order of ring size (smallest to largest) or in alphabetical order when ring sizes are equivalent. This can be observed in the following ring systems:

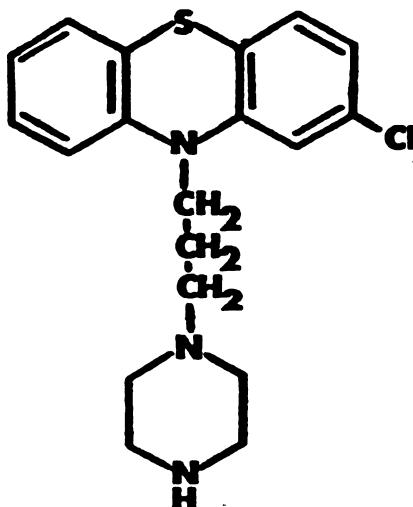


CL - NCNC2.NCNC3



CL - NCOC3.NCSC3

Finally, if two or more rings within a chemical substance qualify for Component Line Formulas but do not occur within the same ring system, there is a separate CL field for each qualifying ring. The CL designation for the following structure illustrates this point:

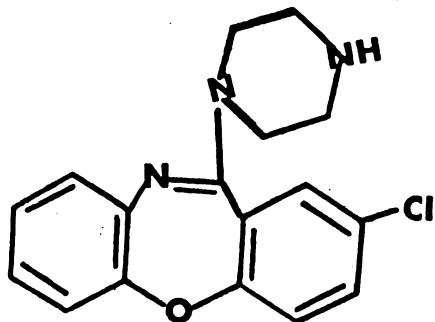


CL - NC2NC2

CL - NC2SC2

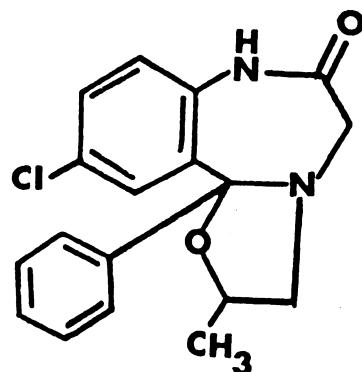
Because of the utility of the ring information fields of CHEMLINE in retrieving structurally related chemical substances, the searchable and printable ring fields for several drugs are given below. Additionally, this information should assist in clarifying the application of the various rules for deriving CHEMLINE ring information.

AMOXAPINE



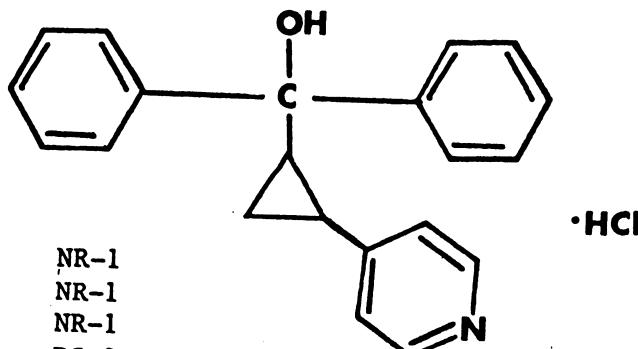
NR - 1
 NR - 3
 RS - 6
 RS - 6,6,7
 RE - C4N2
 RE - C6-C6-C5NO
 CL - NC2NC2
 CL - NC2OC3

OXAZOLAM



NR - 1
 NR - 3
 RS - 6
 RS - 5,6,7
 RE - C6
 RE - C3NO-C6-C5N2
 CL - NCOC2.NC2NC3

CYPROLIDOL HYDROCHLORIDE



NR-1
 NR-1
 NR-1
 RS-3
 RS-6
 RS-6
 RE-C3
 RE-C6
 RE-C5N

SEARCHABLE, NON-PRINTABLE RING INFORMATION FIELDS

In addition to the four searchable and printable ring information elements discussed thus far, there are three ring information fields which can be searched, but not printed in CHEMLINE. These fields are derived by fragmenting the RS, RE, and CL fields.

13.4.12 RING SIZE FRAGMENTS (SF)

These fragments are generated from the RS field by saving the unique Ring Sizes of single ring systems as Size Fragments, and by breaking on the commas of the RS field for multiple ring systems and saving the different individual Ring Sizes. To illustrate this point, the numbers occurring in the SF field for Amoxapine (shown previously) would be 6 and 7 only.

13.4.13 RING ELEMENTAL ANALYSIS FRAGMENTS (EF)

The Elemental Fragments are generated from the RE field by breaking the character string on hyphens for multiple ring systems. For single ring systems, the RE value is saved as an Elemental Fragment. As is the case with Size Fragments, only unique occurrences of character strings are saved. Oxazolam would have the following three Elemental Fragments: C6, C3NO and C5N2.

13.4.14 COMPONENT LINE FORMULA FRAGMENTS (CF)

Individual Component Line Formula Fragments are generated from the CL field by breaking on periods for ring systems which have two or more rings having Component Line Formulas. Thus, each Component Line Formula of Oxazolam can be searched independent of the other (NCOC2 or NC2NC3).

ADDITIONAL INFORMATION FIELDS

The following four sections describe additional types of information to be found in the CHEMLINE unit record.

13.4.15 MESH HEADING (MH)

The MH field contains only the single D-Category term from the NLM Medical Subject Headings (MeSH) controlled vocabulary that is an exact match with either the CAS preferred index name (N1) or a synonym (SY) in the Registry Number record. Some exceptions to the 1:1 exact match relationship between MeSH term and CHEMLINE exist because the current version of the CAS Registry Nomenclature File (RNF) used to build CHEMLINE and the RNF used to match the MeSH terms were not the same generation. In some cases names previously matching MeSH terms are no longer carried in the latest version of the RNF.

Some plural MeSH terms are included in the MH field. An example of this is found in the Registry Number record for the chemical compound pyridine. The MeSH term PYRIDINES is shown in the MH field. The "s" was deleted from the MeSH term PYRIDINES for name-matching purposes and then reapplied to provide the appropriate MeSH term. There are 3,226 MeSH terms in CHEMLINE. Note that plural MeSH terms are not used generically in CHEMLINE, thus the term PYRIDINES is not appended to any records for substituted pyridine compounds.

13.4.16 HEADING FRAGMENTS (HF)

With the blank being used as a break character, the individual alphabetic strings of the MeSH Heading (MH) field are saved as Heading Fragments. The HF field may be searched but is not printable.

13.4.17 LOCATOR (LO)

This searchable and printable field of CHEMLINE identifies sources of information or citations relevant to the specific chemical substance retrieved. At this time, Locator designations are carried in CHEMLINE for the TOXLINE file (TOXLINE), the TOXBACK file (TOXBACK), the Registry of Toxic Effects of Chemical Substances (RTECS), the Toxicology Data Bank (TDB) and the Food and Drug Administration New Drug Application File (FDA-NDA) the only file not in residence in NLM. In the future, other Locator designations such as CANCERLIT may be added to CHEMLINE. Users will be notified via the NLM Technical Bulletin as these additions are made.

The Locator Field primarily shows the presence of the Registry Number of a particular substance in the specific files shown. The MEDLARS Locator, however, only shows that one of the names of a particular substance matches a category D Mesh Term according to the conventions in Section 13.4.15, and does not mean that the RN is present in Medline. Thus printing RN,ON,MH,LO for Phosphamidon gives the following data:

RN - 13171-21-6
N1 - Phosphoric acid, dimethyl ester, ester with
2-chloro-N,N-diethyl-3-hydroxycrotonamide (8CI)
N1 - Phosphoric acid,
2-chloro-3-(diethylamino)-1-methyl-3-oxo-1-propenyl dimethyl
ester (9CI)
SY - Dimecron
SY - Phosphamidon
SY - Dimecron 50
SY - Dimecron 100
SY - Dimecron-20
SY - Phosphamidone
SY - Sundaram 1975
SY - Merkon
MH - PHOSPHAMIDON

LO - TOXLINE
LO - TOXBACK
LO - RTECS
LO - TDB
LO - MEDLARS

The LO field shows that the compound is present in the TOXLINE, TOXBACK, RTECS, AND TDB databases under RN 13171-21-6, and has a name which matches the MeSH Category D term Phosphamidon. There are no ON numbers for this compound.

As stated in Section 13.4.2, for the approximately 3000 compounds with ON numbers qualified by NLM file designations, the Locator field will reflect the file names other than (CAS) for both the RN and ON fields. Thus in these few cases, the LO field does not solely describe the RN. Printing RN, ON, LO for alpha-chlordane as in Section 13.4.2 will give the following data:

RN - 5103-71-9
ON - 22212-52-8 (CAS)
ON - 26703-86-6 (CAS)
ON - 28140-46-7 (CAS)
ON - 22212-52-8 (TOXLINE) (TOXBACK)
LO - TOXLINE
LO - TOXBACK
LO - RTECS

Based on this information, the searcher can be sure in this case that the cross-referred Registry Number for this compound, (ON 22212-52-8) is present in TOXLINE and TOXBACK, and that the current Registry Number (RN 5103-71-9) is in RTECS (since this file designation is not also present in the ON field), but can't be sure if 5103-71-9 is in TOXLINE or TOXBACK, since this information may have been moved down from the ON field. In fact, in this particular case both Registry Numbers are in both TOXLINE and TOXBACK, and for the large bibliographic data bases, this will usually be true. If file designations for the smaller substance-oriented data bases such as TDB and RTECS are present in both the ON and LO fields, they usually apply to the ON Registry Number. For the few cases where doubt exists, all Registry Numbers should be used in searching.

13.5 COMMANDS

All the commands and capabilities of NLM's ELHILL software are available in CHEMLINE, with the exception of those commands peculiar to the MeSH controlled vocabulary. Of these commands, the most useful in CHEMLINE searching are NEIGHBOR and PRINT. All commands may be preceded by double quotation marks (optional). Commands are instructions to the program requesting operations other than searching.

13.6 SEARCHING CHEMLINE

In order to effectively search CHEMLINE, a user should, at a minimum, be thoroughly familiar with Sections 13.4.1, 13.4.2, 13.4.3, 13.4.5, 13.4.6, 13.4.7 and 13.4.17 of the CHEMLINE section of this manual. These sections discuss Chemical Abstracts Service (CAS) Registry Numbers, cross-referenced Registry Numbers, systematic chemical nomenclature, synonymy, name fragmentation, molecular formulas, and locator(s). The ensuing discussions are based on the use of the CHEMLINE fields covered in these sections of the manual as well as the two ELHILL commands discussed in the latter part.

13.6.1 COMMON NAMES

To determine whether or not a chemical is in the CHEMLINE file, the name can be searched in an alphabetical index through the use of the NEIGHBOR (NBR) command. (The name should include spaces, if appropriate). For example, to locate Salicylaldehyde, the following steps would be taken:

SS 1 /C?

USER:

NBR SALICYLALDEHYDE

PROG:

POSTINGS	TERM
1	SALICYLALANILINE (SY)
1	SALICYLALDEHYDATO (NF)
1	SALICYLALDEHYDE (N1)
66	SALICYLALDEHYDE (NF)
1	SALICYLALDEHYDE ANILINE (SY)

UP N OR DOWN N?

Since the chemical is found in the index as a preferred index name (N1), there is no need to further scan the index (this would also hold true if a name is found with the SY mnemonic following it). To avoid answering the UP or DOWN program prompt, a FIND command can be issued:

USER:

FIND SALICYLALDEHYDE (N1)

PROG:

SS (1) PSTG (1)

The program has now located the CHEMLINE record for the exact compound. At this point, the complete record or any part of it may be printed. The following command is issued to print a partial record:

SS 2 /C?

USER:

PRT RN, N1, ON

PROG:

1
RN - 90-02-8
N1 - Salicylaldehyde (SCI)
N1 - Benzaldehyde, 2-hydroxy- (9CI)

Notice that an ON field did not print out although it was specified; this indicates the lack of cross-referenced Registry Numbers for this chemical. However, a user should always include the CN when issuing a tailored print command that includes RN so that all pertinent Registry Numbers are shown.

If the term SALICYLALDEHYDE is searched without the (N1) field identifier, a Multi-Meaning (MM) message is received which indicates the presence of a CHEMLINE record for the specific term as well as records containing the term as a name fragment (NF):

SS 3 /C?
USER:
SALICYLALDEHYDE

PROG:
MM (SALICYLALDEHYDE) (2)
1 SALICYLALDEHYDE (N1)
2 SALICYLALDEHYDE (NF)
SPECIFY NUMBERS, ALL, OR NONE-

USER:

Entering 1 after the USER prompt would retrieve the record for the specific chemical; 2 or ALL would retrieve the specific chemical as well as the derivatives of Salicylaldehyde, and a NONE response would cause the program to proceed to the next search statement without retrieving any records. (The program will return a NO POSTINGS (NP) message if the NONE response is selected.)

If a name consists of two or more terms (separated by spaces), it can be searched without a field identifier:

SS 4 /C?
USER:
SODIUM TETRAPHENYLBORATE
PROG:
SS (4) PSTG (1)

In this case, the record for the specific chemical is retrieved. The complete record can be printed with an abbreviated PRINT DETAILED (PRT DL) command:

SS 5 /C?

USER:

PRT DL

PROG:

1

RN - 143-66-8

UN - 14485-18-8 (CAS)

MF - C24-H20-B.Na

N1 - Borate(1-), tetraphenyl-, sodium (8CI) (9CI)

SY - Sodium tetraphenylborate

SY - Sodium tetraphenylboron

SY - Kalignost

SY - Sodium tetraphenylborate(1-)

SY - Tetraphenyl boron sodium salt

SY - Sodium tetraphenylboride

SY - Tetraphenyl sodium borate

SY - Dodite kalibor

SY - Sodium tetraphenylboride(1-)

NR - 1

RS - 6

RE - C6

LO - TOXLINE

LO - TOXBACK

There are two Registry Numbers for Sodium tetraphenylborate; 143-66-8 is the current number and 14485-18-8 is a superceded number previously used by CAS. The lack of an NLM locator shows that the UN Registry Number is not in any of the bibliographic data bases.

13.6.2 CHEMICAL NAMES

Short chemical names can be searched directly in CHEMLINE by inputting the exact character string, including spaces and special characters. The following interactions demonstrate such a search with a listing of the record retrieved:

SS 1 /C?

USER:

2-AMINO-1,2-DIPHENYLETHANOL

PROG:

SS (1) PSTG (1)

SS 2 /C?

USER:

PRT DL

PROG:

1
RH - 530-36-9
ON - 21394-78-5 (CAS)
MF - C14-H15-N-O
N1 - Ethanol, 2-Amino-1,2-diphenyl- (3CI)
N1 - Benzeneethanol, beta-amino-alpha-phenyl- (9CI)
SY - 2-Amino-1,2-diphenylethanol
HR - 1
RS - 5
RE - C5
LO - TOXLINE
LO - RTECS

When a chemical name that exceeds 39 characters is searched, several records may be retrieved. This results from an automatic truncation of terms after the 39th character and retrieval of all records matching up to that point. Should this happen, more specificity may be obtained by combining the initial retrieval with name fragments. This procedure is exemplified in the search for the following chemical:

2H-1,4-Benzodiazepin-2-one, 1,3-dihydro-
1-methyl-7-nitro-5-phenyl

SS 3 /C?

USER:

2H-1,4-Benzodiazepin-2-one, 1,3-Dihydro

PROG:

SS (3) PSTG (26)

SS (4) /C?

USER:

(NF) 1 (NF) AND METHYL AND 7 AND NITRO AND 5 AND

PROG:

CNT 4

USER:

PHENYL

PROG:

TIME CVFLW: CONT? (Y/N)

USER:

Y

SS (4) PSTG (7)

SS 5 /C?

USER:

3 AND 4

PROG:

SS (5) PSTG (2)

SS 6 /C?

USER:

PRT RN, ON, N1

PROG:

1

RN - 2011-67-8

N1 - 2H-1,4-Benzodiazepin-2-one,
1,3-Dihydro-1-methyl-7-nitro-5-phenyl- (8CI)(9CI)

2

RN - 1959-37-1

N1 - 2H-1,4-Benzodiazepin-2-one,1,3-dihydro-1-methyl-7-
nitro-5-(alpha,alpha,alpha-trifluoro-o-tolyl)- (8CI)

N1 - 2H-1,4-Benzodiazepin-2-one,
1,3-Dihydro-1-methyl-7-nitro-5-(2-trifluoromethyl)phenyl)- (9CI)

WARNING:

The (NF) at the beginning of Search Statement 4 stipulates that all terms which follow (excluding Boolean Operators) must be name fragments. However, an (NF) must also follow any numerical name fragments that are smaller than the current Search Statement number. Otherwise, the system will assume that such numbers refer to the previous Search Statements.

Whenever a NO POSTING (NP) message is received in response to a search for a chemical name, the entire name can be fragmented and then searched. The following search is for a chemical name as it appears in the Pesticide Manual:

SS 1 /C?

USER:

5-CHLORO-4-PHENYL-1,2-DITHIOL-3-ONE

PROG:

NP (5-CHLORO-4-PHENYL-1,2-DITHIOL-3-ONE)

SS 1 /C?

USER:

(NF) 5 AND CHLORO AND 4 AND PHENYL AND 1,2 AND

PROG:

CNT 1

USER:

DITHIOL AND 3 AND ONE

PROG:

TIME OVFLW: CONT? (Y/N)

USER:

Y

PROG:

SS (1) PSTG (19)

Thus, there are 19 CHEMLINE records containing, AT A MINIMUM, the searched name fragments. Rather than listing all of the full records, it would be more convenient to list the chemical names only. The following command is used to list the chemical names contained in the first 5 records:

SS 2 /C?

USER:

PRT 5 N1

PROG:

1

N1 - 3H-1,2-Dithiol-3-one, 5-chloro-4-phenyl- (9CI)

2

N1 - 3H-1,2-Dithiol-3-one, 5-chloro-4-phenyl-, mixt. with (2-bromo-2-nitroethenyl)benzene (9CI)

3

N1 - 3H-1,2-Dithiol-3-one, 5-chloro-4-phenyl-, mixt. with phenol

4

N1 - Sorbitan, mono-9-octadecenoate, (Z)-, mixt. with 5-chloro-4-phenyl-3H-1,2-dithiol-3-one (9CI)

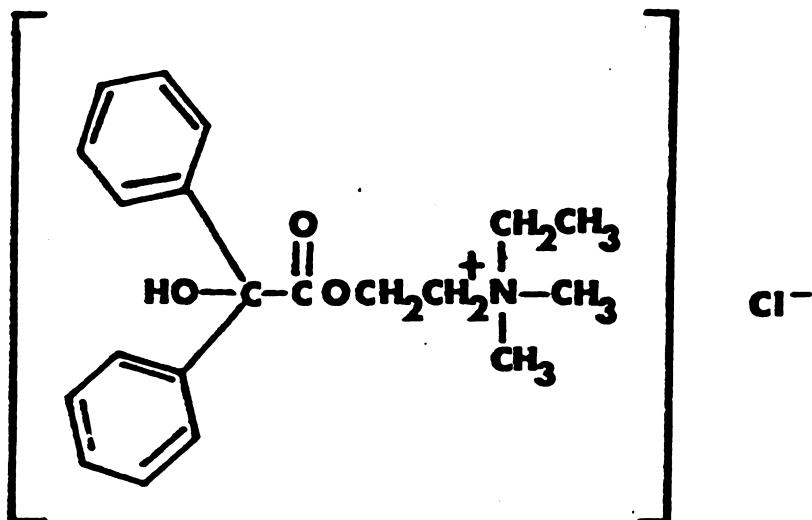
5

N1 - 3H-1,2-Dithiol-3-one, 5-chloro-4-phenyl-, mixt. with 3,3,4,4-tetrachlorotetrahydrothiophene 1,1-dioxide (9CI)

A user familiar with nomenclature would recognize that the first chemical name is the compound of interest. Such an individual would then list the full record with a PRT 1 DL command. However, some searchers may not recognize this fact, since the 3H in the name above does not appear in the chemical name originally searched. These persons would probably list the remaining N1 names. Even after printing all 19 chemical names, one will not find an exact match to the initial chemical name. At this point, the searcher should seek help from the person requesting the search or a person knowledgeable in chemical nomenclature.

13.6.3 MOLECULAR FORMULA

In addition to common and chemical names, the molecular formula of a chemical substance may be a useful search parameter in CHEMLINE. Assuming that a common name is not known and a systematic chemical name cannot be readily derived for the following substance, it can be searched for strictly by its elemental composition:



Following the rules given previously in the Molecular Formula section (Hill and dot-disconnect conventions), the search would be conducted as follows:

SS 1 /C?M

USER:

(MF) C20-H26-N-03.CL

PROG:

SS (1) PSTG (1)

SS 2 /C?

USER:

PRT RN, ON, N1

PROG:

1

RN - 1164-38-1

N1 - Ammonium, ethyl (2-hydroxyethyl)dimethyl-, chloride, benzilate (8CI)

N1 - Ethanaminium,
N-ethyl-2-((Hydroxydiphenylacetyl)oxy)-N,N-dimethyl-, chloride (9CI)

If one were interested in other salts of or mixtures containing this chemical substance, the molecular formula could be truncated after the dot:

SS 2 /C?

USER:

(MF) C20-H26-N-03.:

PROG:

MM (C20-H26-N-03. :) (3)

1 C20-H26-!!-03.BR (MF)

2 C20-H26-N-03.CL (MF)

3 C20-H26-N-03.I (MF)

SPECIFY NUMBERS, ALL, OR, NONE-

USER:

1,3

PROG:

SS (2) PSTG (10)

Thus, the Multi-Meaning Message shows that the bromide and iodide salts of a substance with the molecular formula of interest are in the file. Specifying 1 and 3 retrieves ten records of potential interest (several different chemicals may have the same molecular formula). These records can be listed to select the relevant ones. Recognizing that this base chemical would have the same name fragments in all records of interest, any name fragment(s) found in the N1 name previously printed for the chloride compound (excluding chloride) can be used to eliminate irrelevant records:

SS 3 /C?

USER:

2 AND ETHANAMINIUM (NF)

PROG:

SS (3) PSTG (2)

SS 4 /C?

USER:

PRT RN, ON, N1

PROG:

1

RN - 6422-49-7

N1 - Ammonium, ethyl (2-hydroxyethyl)dimethyl-, iodide, benzilate (8CI)

N1 - Ethanaminium, N-ethyl-2-((Hydroxydiphenylacetyl)oxy)-N,N-dimethyl-, iodide (9CI)

2

RN - 55019-65-3

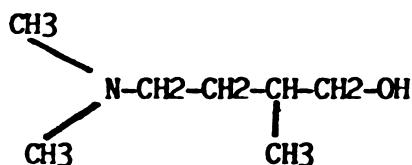
N1 - Ethanaminium, N-ethyl-2-((Hydroxydiphenylacetyl)oxy)-N,N-dimethyl-, bromide (9CI)

13.7 CALCULATING MOLECULAR FORMULAS

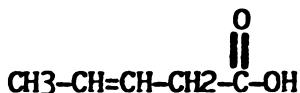
Most chemical substances consist of an open chain of atoms (acyclic), a closed ring of atoms (cyclic), or a combination of the two states. The following discussions should provide helpful hints as to how molecular formulas for chemical structures can be calculated.

13.7.1 CHAIN COMPOUNDS

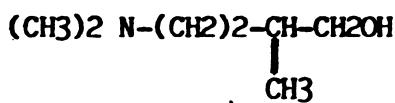
Normally, chemical structures that are totally acyclic are drawn in a manner such that every atom and its number of occurrences are explicitly shown. In such cases, the calculation of the molecular formula is simply a matter of totaling similar atoms. This is demonstrated below for several structures with the molecular formula given in the CHEMLINE format:



MF - C₇-H₁₇-N-O



MF - C₅-H₈-O₂



MF - C₇-H₁₇-N-O

Notice that the third structure has the same molecular formula as the first. This is true because both structures represent the same chemical compound. The third structure contains multipliers (numerical subscripts on parentheses) to indicate the repetition of like groups.

13.7.2 RING COMPOUNDS

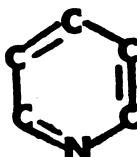
The normal chemical diagram of a ring containing compound will not explicitly show carbon (C) and hydrogen (H) atoms (all other atoms will be shown). However, the number of C and H atoms in a ring can be determined through the following considerations:

- a) Every node (angle) in a ring must contain an atom. Where there is none, insert a C.
 - b) Every C in a ring must be surrounded by four bonds (lines). Where there are less than four bonds, add an H to the C for every missing bond (line).

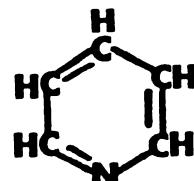
The following diagrams represent a typical ring (1) as normally structured, (2) after application of rule a, and (3) after application of rule b.



(1)

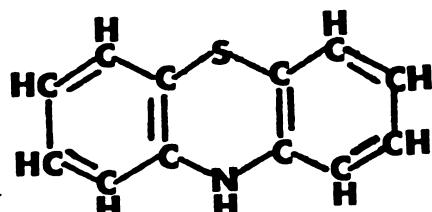
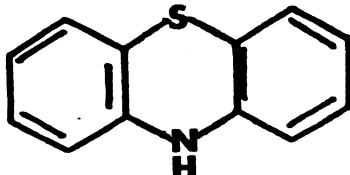


(2)



(3)

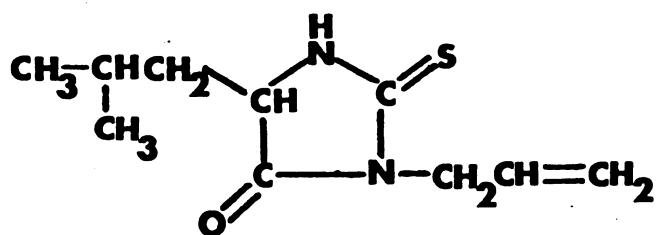
Thus, the molecular formula for the above compound would be C₅H₅N. A second example will use the phenothiazine ring, as normally structured and after application of rules a and b.

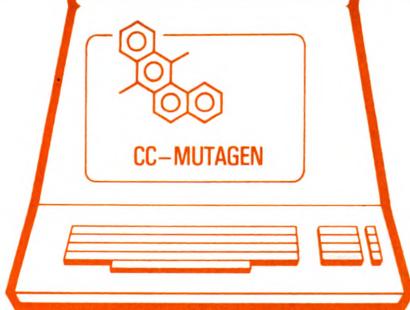


MF - C12-H9-N-S

13.7.3 CHAIN/RING COMPOUNDS

Chemical substances that contain both chains and rings in their overall structures probably represent the largest of the three structural classifications given. For those compounds, just apply the previous rules to obtain the totality of atoms contained in a structural diagram. The explicit chemical structure for the first compound drawn in Section 13.4.3 (Molecular Formula) is shown below:





RTECS

REGISTRY OF TOXIC EFFECTS
OF CHEMICAL SUBSTANCES

CONDENSED

NATIONAL LIBRARY OF MEDICINE
SPECIALIZED INFORMATION SERVICES
TOXICOLOGY INFORMATION PROGRAM

Bethesda, Maryland 20209

RTECS (Registry of Toxic Effects of Chemical Substances) is the National Library of Medicine's online version of the National Institute for Occupational Safety and Health's (NIOSH) annual compilation of substances with toxic action. The original collection of data that makes up the RTECS was known as the Toxic Substances List, compiled in 1971 by NIOSH in response to the Occupational Safety and Health Act of 1970. The hard copy version of RTECS is updated annually with quarterly microfiche editions available. NIOSH remains responsible for the data in RTECS, and for providing quarterly updates to NLM. RTECS currently contains toxicity data for approximately 47,000 substances (5/81).

RTECS is structured around individual chemical records of substances with toxic action, and thus provides a single source document for basic toxicity information. RTECS includes some listings of unevaluated toxicity data and specific toxicological effects which are searchable. The sources of the toxicity data are identified, with the name of the journal, volume, page, and year given. Also included in RTECS are threshold limit values, aquatic toxicity ratings, air standards, NTP carcinogenic bioassay information, toxicological/carcinogenic review information, compound classification, and NIOSH Criteria Document availability.

RTECS is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via nationwide networks using telephone lines and small computers with access nodes located in many major cities.

The user can search RTECS for a particular chemical record by entering the Secondary Source ID, CAS Type 1 Name, or CAS Registry Number. The user can also search RTECS for information on a group of compounds or to identify a group of substances on the basis of a selected effect or criteria, or to focus on selected effects reported for a given substance. Online RTECS gives the user the flexibility of interactive searching and retrieval which allows focusing on subsets of data and tailoring of printouts according to user needs. A simulated RTECS record, in the format it appears in the online file follows:

SECONDARY SOURCE ID
CAS TYPE 1 NAME
CAS REGISTRY NUMBER
CLASSIFICATION CODE
CLASSIFICATION CODE
CLASSIFICATION CODE
AQUATIC TOXICITY RATING

NIOSH/KU9625000
ETHYLENE, CHLORO-
75-01-4
AGRICULTURAL CHEMICAL
TUMORIGEN
MUTAGEN
AQUATIC TOXICITY RATING: TLM:OVER 1000 PPM WQCHM
"WATER QUALITY CHARACTERISTICS OF HAZARDOUS MATERIALS," W. HANN, AND P.A. JENSEN, ENVIRONMENTAL ENGINEERING DIVISION, CIVIL ENGINEERING DEPARTMENT, TEXAS A & M UNIVERSITY, VOLUMES 1-4, 1974 3.-74

TOXICOLOGY/CANCER REVIEW	CARCINOGENIC DETERMINATION:HUMAN POSITIVE IARC" IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN. 19,377,79
STANDARDS/REGULATIONS	DOT-FLAMMABLE GAS, LABEL:FLAMMABLE GAS FERAC FEDERAL REGISTER. 41,57018,76
NIOSH CRITERIA DOCUMENTS	CRIT DOC. OCCUPATIONAL EXPOSURE TO VINYL HALIDES RECM STD-AIR:TWA 1 PPM;CL 5 PPM/15M NTIS" NATIONAL TECHNICAL INFORMATION SERVICE.
STATUS	"NIOSH MANUAL OF ANALYTICAL METHODS" VOL 1 178
STATUS	NIOSH CURRENT INTELLIGENCE BULLETIN 28, 1978
STATUS	REPORTED IN EPA TSCA INVENTORY, 1980 EPA TSCA 8E NO:03780104-FOLLOWUP REPLY RECEIVED AS OF APRIL, 1979
SYNONYMS	CHLORETHENE
SYNONYMS	VINYL CHLORIDE
MOLECULAR FORMULA	C2-H3-CL
MOLECULAR WEIGHT	62.50
WISWESSER LINE NOTATION	G1U1
ENTRY MONTH	8104
TOXIC DATA SOURCE	BBRCA9 BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS. 63,363,75
TOXDATA KEYWORDS	MUTATION;MICROORGANISMS;S. TYPHIMURIUM; BACTERIA;2000 PPM/48H

S RTECS is available at NLM Monday, Wednesday, and Thursday from 3:00 A.M. to 8:00 P.M., and Tuesday and Friday 3:00 A.M. to 9:00 P.M., and Saturday from 8:30 A.M. to 5:00 P.M. (Eastern Time.)

S The cost of access to the RTECS file is \$22 per hour during prime time (10:00 a.m. to 5:00 p.m.), and \$15 per hour at non prime times. There is a charge of \$0.15 per page for offline printout. (effective October 1, 1981)

S For Online Systems services including access to the RTECS file contact:

MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-6193

For RTECS content including search strategies contact:

Specialized Information Services
National Library of Medicine
8600 Rockville Pike
Bethesda, Md. 20209
Telephone: (301) 496-1131

fact*sheet

Bethesda, Maryland 20014

September, 1978

REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)

1977 VERSION WITH QUARTERLY UPDATE

What is RTECS?

RTECS--the Registry of Toxic Effects of Chemical Substances--(formerly the Toxic Substances List) is an annual compilation prepared by the National Institute for Occupational Safety and Health (NIOSH). The contents of the 1977 printed version and the first quarterly update available on microfiche are now available on-line from NLM. NIOSH remains responsible for the data in RTECS, and for providing quarterly updates to NLM.

RTECS now contains toxicity data for approximately 31,600 substances. The sources of the toxicity data are identified through the RTECS CODEN system, plus the name of the journal, volume, page, year. RTECS also contains some listings of toxicological effects, which are searchable. Threshold limit values, recommended standards in air, and aquatic toxicity are other data elements in this file.

A sample RTECS record, as it appears in the on-line file is shown below:

SOURCE IDENTIFICATION	NIOSH/AB1060000
PRIME NAME	ACENAPHTHENE, 5-NITRO-
CAS REGISTRY NUMBER	602-87-9
CLASS OF COMPOUND	CARCINOGEN
TOXICOLOGY/CANCER REVIEW	CARCINOGENIC DETERMINATION:ANIMAL POSITIVE IARC** IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN.
STATUS	16,319,78 NCI CARCINOGENESIS BIOASSAY COMPLETED AS OF FEB 1978
SYNONYMS	ACENAPHTHYLENE, 1,2-DIHYDRO-5-NITRO-
SYNONYMS	1,2-DIHYDRO-5-NITRO-ACENAPHTHYLENE

RTECS, 1977 edition; \$17.50 per copy. Order No. 017-033-00271-1. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

U.S. Department of Health, Education, and Welfare
Public Health Service
National Institutes of Health

SYNONYMS	5-NAN
SYNONYMS	NCI-C01967
SYNONYMS	5-NITROACENAPHTHENE
SYNONYMS	5-NITROACENAPTHENE
SYNONYMS	5-NITRONAPHTHALENE ETHYLENE
MOLECULAR FORMULA	C12-H9-N-02
MOLECULAR WEIGHT	199.22
WISWESSER LINE NOTATION	L566 1A LT&J HNW
TOXIC DATA SOURCE	TJIDAH Tokyo Jikeikai Ika Daigaku Zasshi Tokyo Jikeikai Medical Journal. 89,475
TOXDATA KEYWORDS	ORAL;RAT;RODENTS;TDLo;120 gm/kg/17W-C EFFECTS;CARCINOGENIC
TOXIC DATA SOURCE	BJCAAI British Journal of Cancer. 30,4
TOXDATA KEYWORDS	ORAL;HAMSTER;RODENTS;TDLo;504 gm/kg/24 TOXIC EFFECTS;NEOPLASTIC

How is RTECS accessed?

RTECS is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via a nationwide network using telephone lines and small computers with access nodes located in many major cities.

How is RTECS searched?

Records on a given route, species, effect, etc., may be retrieved from RTECS by entering the desired free text terms, or specific toxic effects using the search qualifier of (IX). Chemical substances can be searched for by using their Chemical Abstracts Service (CAS) Registry Numbers or names. Terms may be entered singly or combined by means of the Boolean operators AND, OR, and AND NOT. Records may be printed on-line at the user's terminal, or off-line and mailed to the user from NLM. To view the entire record on a substance, one enters "PRINT DETAILED COMPLETE.

Where is RTECS available?

RTECS is available at approximately 800 academic, commercial and government organizations.

For further information, please contact:

RTECS
Toxicology Information Program
Specialized Information Services
National Library of Medicine
8600 Rockville Pike, Room C-6B
Bethesda, Maryland 20014
Telephone: (301) 496-1131

S. Laron Valley, PhD.

Registry of Toxic Effects of Chemical Substances*

1977 Edition

14.1 INTRODUCTION

Beginning September 1, 1977, NLM added the 1976 edition of a new online data retrieval file, called the Registry of Toxic Effects of Chemical Substances (RTECS) to its family of online services. It is available at the standard NLM online user charge rates. RTECS, formerly the Toxic Substance List, is an annual compilation prepared by the National Institute for Occupational Safety and Health (NIOSH) as mandated by the Occupational Safety and Health Act of 1970 (PL 91-596). The printed version, which is for sale by the Superintendent of Documents, U.S. Government Printing Office, offers a detailed description of the purpose and content of RTECS.

On September 11, 1978, the 1977 edition became available online. RTECS contains toxicity data for approximately 31,600 substances known by approximately 85,000 synonyms. The source of the toxicity data is currently presented in the RTECS CODEN System with notation of the name of the source, volume, page and year. The RTECS CODEN System is part of the hard copy publication. This special system will assist the user in accessing the source of the data.

RTECS also contains some listings of toxicological effects, presented in an abbreviated format. In addition, it contains threshold limit values, recommended standards in air, aquatic toxicity, and the like. RTECS is also searchable using free text. The 1977 version of RTECS with the quarterly update has more substances with toxicity data. It also has data regarding eye and skin irritation, which were not previously included. The sources of "Toxicology Review" (the TC field) are also listed, as the volume, page and year. A classification category, searchable as terms/phrases (see TABLE IV), has been developed by NIOSH and is now included in the file. Two other changes include: (1) the molecular formula (MF) field, which is now in the same format as CHEMLINE, carbon atoms first, then hydrogens, then elements alphabetically, and (2) the source identification (SI) field has been expanded two characters. One must still use PRINT DL COMPLETE to obtain the entire record.

*GPO Order Number 017-033-00271-1; \$17.50 per copy U.S.; \$21.88/copy non-U.S. Microfiche, 4 issues: \$17.50, 1977 edition.

NLM obtained the machine-readable version from NIOSH for conversion to an on-line data retrieval source. Although the Library is making the RTECS file available on-line, NIOSH maintains responsibility for the file contents. To this end, then, questions on RTECS file content should be directed to: The Editor, Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, 4676 Columbia Parkway, Cincinnati, OH 45226. Help on special questions may be obtained by telephoning NIOSH at 513/684-8317.

14.2 GENERAL ASSISTANCE TELEPHONE NUMBER

The telephone number for questions on system and communication problems, program interpretation is 800/638-8480 or 301/496-6193 (MMS). The telephone number for assistance in search strategy is the Toxicology Information Program 301/496-1131. Problems with the content of the file should be addressed to NIOSH, RTECS Editor, 4676 Columbia Parkway, Cincinnati, OH 45226 (TEL - 513/684-8317).

14.3 ENTERING THE RTECS FILE

All NLM online service subscribers may access RTECS by following NLM login procedures. To switch to RTECS, users enter FILE RTECS.

14.4 RTECS UNIT RECORD

The unit record in RTECS consists of twenty (20) data elements. Each element is identifiable to ELHILL during search by a mnemonic. The table below indicates the basic characteristics of the available search and print elements.

REMINDER: Online users can always obtain a description of the file, the printable and searchable elements by entering EXPLAIN UNIT RECORD, or EXPLAIN RTECS.

```
FILE RTECS
YOU ARE NOW CONNECTED TO THE RTECS FILE.
USER:
EXPLAIN UNIT RECORD
```

TABLE I
The RTECS Unit Record

NAME OF ELEMENT	DIRECT SEARCH ABBREV.	PRINT ABBREV.	PRINT OPTIONS			
			PRT	PRT FULL	PRT TOXDATA	PRT DL
Source Identification	(SI)	SI	X	X	X	X
Chemical Subst. Prime Name	(N1)	N1	X	X	X	X
Chemical & Locant Name Fragments	(NF)	--				
Chemical Definition	See TW	CDEF				X
Chem. Abstr. Reg. No.	(RN)	RN	X	X	X	X
Molecular Formula	(MF)	MF				X
Molecular Formula Fragments	(FF)	--				X
Molecular Weight	--	MW				X
Wiswesser Line Notation	(WL)	WL				X
Synonyms	(SY)	SY				X
Class of Compound	(CC)	CC				X
Toxicity Data Index Strings	(IX)	TDKW		X*	X	X
Toxic Data Source	See CT	SO	X*	X	X	X
Aquatic Toxicity Rating	See TW	AQ	X			X
Toxicology & Cancer Review	See TW	TC	X			X
Standards & Regulations	See TW	SR	X			X
NIOSH Criteria Documents	See TW	NC	X			X
Status	See TW	ST	X			X
Text Words (unique words from above 6 fields)	(TW)	--				
Citation Terms (extracted terms from the source field)	(CT)	SO				

*Note: If Toxicity Data Index Strings (IX) are NOT searched, one MUST use:
PRINT TOXDATA COMPLETE or PRINT DL COMPLETE or PRINT FU COMPLETE.

All elements except toxicity data keywords, source, textwords, name fragments, and molecular formula fragments will be displayed with the PRINT DETAILED command. One must use PRINT DL COMPLETE to view the entire record if toxicity data index strings (IX) are not searched.

UNIT RECORD EXPLANATION - RTECS

14.4.1 SOURCE IDENTIFICATION (SI)

The sequence number assigned alphabetically to chemicals using the prime name, e.g.: NIOSH/AA4550000.

14.4.2 CHEMICAL PRIME NAME (N1)

Usually the nomenclature used by Chemical Abstracts Service (CAS) in the 8th Collective Index; the first 36 characters are directly searchable; e.g.

(N1) ANABASINE, 1-NITROSO-

Always NEIGHBOR the name first, to be assured of punctuation, spelling, etc. CHEMLINE has both 8CI and 9CI names; RTECS has only 8CI names.

SS 1 /C?

USER:

NBR ANABASINE, 1-NITROSO-

PROG:

POSTINGS TERM

1 ANABASINE, SULFATE (N1)
1 ANABASINE, SULFATE MIXED WITH PHOSPHORO (N1)
1 ANABASINE, 1-NITROSO- (N1)
1 ANACARDONE (NF)
1 ANACARDONE (SY)

UP N OR DOWN N?

FIND ANABASINE, 1-NITROSO-

PROG:

SS (1) PSTG (1)

SS 2 /C?

USER:

PRT 1 DL COMPLETE INDENTED

PROG:

SOURCE IDENTIFICATION	NIOSH/BV4550000
PRIME NAME	ANABASINE, 1-NITROSO-
CAS REGISTRY NUMBER	1133-64-8
SYNOMYS	N-NITROSOANABASINE
SYNOMYS	1-NITROSOANABASINE
SYNOMYS	N'-NITROSOANABASINE
SYNOMYS	N-NITROSO-2-(3'-PYRIDYL)PIPERIDINE
MOLECULAR FORMULA	C10-H13-N3-O
MOLECULAR WEIGHT	191.26
WISWESSER LINE NOTATION	T6NTJ ANO B- CT6NJ
CLASS OF COMPOUND	CARCINOGEN
TOXIC DATA SOURCE	BJCAAI British Journal of Cancer, 18,265,64
TOXDATA KEYWORDS	ORAL;RAT;RODENTS;TD _{Lo} ;8550 mg/kg/57W ;TOXIC EFFECTS;CARCINOGENIC

14.4.3 CHEMICAL NAME FRAGMENTS (NF)

Name and locant fragments generated from the chemical substance prime name field, as well as synonym field; e.g. (NF) ANABASINE AND NITROSO AND 1 (NF). (The NF mnemonic is reentered after the number 1 in this example to specify name fragment instead of search statement 1.) The rules used in searching CHEMLINE apply.

14.4.4 CHEMICAL DEFINITION (CDEF)

When present, the per cent composition of the ingredients; or the source of the substance, especially for alkaloids, etc. The terms in this field may be searched as text words (TW).

14.4.5 CHEMICAL ABSTRACTS SERVICE (CAS) REGISTRY NUMBER (RN)

A unique number to identify a substance, e.g. 121-73-3. The hard copy publication has a 9 digit number, with leading zeros, for the CAS Registry Number. This has been changed to make the CAS Registry Number searching identical to TOXLINE/CHEMLINE: (up to six digits hyphen 2 digits hyphen 1 digit, with leading zeros removed, e.g. 000121733 is searched as 121-73-3.) (Note: The CAS numbers in RTECS are associated with 8CI names; therefore CHEMLINE may have a newer CAS No. than RTECS.) Note that of the 31,600 records, about 26,000 have CAS Registry Numbers.

14.4.6 MOLECULAR FORMULA (MF)

The molecular formula of the chemical expressed in the same sequence as CHEMLINE, i.e. carbons, hydrogens, then elements alphabetically, i.e., C6-H6-02.

SS 2 /C?

USER:

NBR C6-H6-02

POSTINGS	TERM
1	C6-H6-07 .2NA (MF)
1	C6-H6-S (MF)
1	C6-H7-AS (MF)
1	C6-H7-AS-N-03 .NA (MF)
1	C6-H7-AS-03 (MF)

UP N OR DOWN N?

14.4.7 MOLECULAR FORMULA FRAGMENT (FF)

The elements of the molecular formula, with the exception of hydrogens, e.g. (FF) N AND O2 AND CL AND C6. The rules used in CHEMLINE also apply.

14.4.8 WISWESSER LINE NOTATION (WL)

A linear notation system to describe a chemical structure. This data element is not in all the records. (See CHEMLINE section of this Manual.)

14.4.9 MOLECULAR WEIGHT (MW)

The molecular weight of the substance. This is printable but not directly searchable.

14.4.10 SYNONYMS (SY)

Other names for the chemical substance. All synonyms found in RTECS are listed. There are differences between the synonyms listed in RTECS and those listed in CHEMLINE. The first 36 characters are directly searchable. It is advisable to

NEIGHBOR the name of the substance, FIND the substance then PRINT DL COMPLETE.

e.g., NBR KEPONE
FIND KEPONE (SY)
PRINT DL COMPLETE

Note the word COMPLETE must be added, since the toxicity data field was not searched in this example on Kepone.

14.4.11 TOXICITY DATA INDEX STRINGS

This field contains the route, species, toxicity data and value(s), including some toxicological effects. The data is referenced.

14.4.11.1 TOXICITY DATA INDEX STRINGS (IX)

This field contains information that is linked to prevent false drops. The information has been structured into the following categories:

ROUTE; SPECIES; GENERIC SPECIES; STUDY TYPE; VALUE; TOXIC EFFECTS (if any);
SPECIFIC EFFECT/ORGAN SYSTEM AFFECTED

e.g.:

ORAL;RAT;RODENTS;LD50;54 mg/kg;TOXIC EFFECTS;CARCINOGENIC

Each term or phrase between semicolons is directly searchable and can be "AND"ed together.

e.g. (IX) ORAL AND RAT AND CARCINOGENIC
(IX) INHALATION AND HUMANS AND PULMONARY SYSTEM
(IX) MOUSE AND LD50 AND TERATOGENIC
(IX) MOUSE AND LD50 AND TOXIC EFFECTS
(IX) EYE AND IRRITATION

The tables of abbreviations for (a) Route, Species, Generic Species
(b) Specific Toxic Effect/Systems Affected are listed below.

Please note that one cannot presently range on numeric values,
e.g., specific ranges of LD50 40-50 mg/kg.

Table II lists the route, species, and generic species term which are all searchable using the (IX) abbreviation.

TABLE IIROUTESSPECIES

<u>Abbreviations used in RTECS publication</u>	<u>Search Term used in on-line file</u>	<u>Abbreviation used in RTECS publication</u>	<u>Search Term used in on-line file</u>	<u>Generic Keyw added to the on-line file</u>
1pr	INTRAPERITONEAL	brd	BIRD, NOS*	BIRDS
orl	ORAL	bdw	BIRD, WILD	BIRDS
fnv	INTRAVENOUS	cat	CAT	CATS
scu	SUBCUTANEOUS	ctl	CATTLE	FARM ANIMALS
skn	SKIN	chd	CHILD	HUMANS
ih1	INHALATION	dog	DOG	DOGS
unr	UNREPORTED	dom	DOMESTIC	FARM ANIMALS
ims	INTRAMUSCULAR	dck	DUCK	BIRDS
par	PARENTERAL	frg	FROG	AMPHIBIA
imp	IMPLANT	grb	GERBIL	RODENTS
itr	INTRATRACHEAL	ham	HAMSTER	RODENTS
rec	RECTAL	hmn	HUMAN	HUMANS
ipl	INTRAPLEURAL	inf	INFANT	HUMANS
idr	INTRADERMAL	mam	MAMMAL, NOS*	
idu	INTRADUODENAL	man	MAN	HUMANS
ice	INTRACEREBRAL	mky	MONKEY	
iat	INTRAARTERIAL	mus	MOUSE	RODENTS
ial	INTRAAURAL	pig	PIG	FARM ANIMALS
icv	INTRACERVICAL	pgn	PIGEON	BIRDS
ipc	INTRAPLACENTAL	qal	QUAIL	BIRDS
irn	INTRARENAL	rbt	RABBIT	RODENTS
isp	INTRASPINAL	rat	RAT	RODENTS
ivg	INTRAVAGINAL	sql	SQUIRREL	RODENTS
ocu	OCULAR	tod	TOAD	AMPHIBIA
mul	MULTIPLE	trk	TURKEY	BIRDS
eye	EYE	wmn	WOMAN	HUMANS
		ckn	CHICKEN	BIRDS
		gpg	GUINEAPIG	RODENTS
		cow	COW	FARM ANIMALS
		ewe	EWE	FARM ANIMALS
		shp	SHEEP	FARM ANIMALS

*Not otherwise specified.

TABLE III

RTECS: List of Toxic Effects

(a)

Allergenic	Mucous Membrane
Blood Clotting Mechanism	Musculoskeletal
Blood	Mouth
Blood Pressure	Mutagenic
Carcinogenic	Neoplastic
Central Nervous System	Peripheral Nervous System
Corrosive	Psychotropic
Cumulative	Pulmonary System
Cardiovascular	Red Blood Cell
Drug Dependence	Skin
Eye	Systemic
Gastrointestinal Tract	Teratogenic
Glandular	Toxic Effects Unspecified
Irritant	White Blood Cell

(b)
(Eye/skin irritation)
Irritation
Mild
Moderate
Severe
Non Standard Exposure

These are searchable as unabbreviated index strings, e.g. (IX) CENTRAL NERVOUS SYSTEM. They print as part of the toxicity data field, e.g., PRINT TOXDATA.

14.4.11.2 TOXICITY DATA DOSES/CONCENTRATIONS (Study Type(s))

The toxicity data field has seven abbreviations which have been used to describe the dose more completely. These seven are searchable as part of the toxicity data index strings (IX). Their printed RTECS definitions are:

TDLo - Toxic Dose Low - "The lowest dose of a substance, published or made available to NIOSH, introduced by any route other than inhalation over any given time period and reported to produce any toxic effect in humans, or to produce carcinogenic, mutagenic or neoplastic effects in humans or animals."

TCLo - Toxic Concentration Low - "Any concentration of a substance in air to which humans or animals have been exposed for any given period of time that has been reported to produce any toxic effects in humans or to produce a carcinogenic, teratogenic, mutagenic or neoplastigenic toxic effect in animals or humans."

LDLo - Lethal Dose Low - "The lowest dose of a substance other than LD50 introduced by any route other than inhalation over any given period of time and reported to have caused death in humans and animals introduced in one or more divided portions."

LD50 - Lethal Dose Fifty - "A calculated dose of a chemical substance which is expected to cause the death of 50% of an entire defined experimental animal population, as determined from the exposure of a substance, by any route other than inhalation." Other lethal dose percentages, such as LD1, LD10, LD30, LD99, etc. may be published in the literature. Such data would be in RTECS if these figures were the lowest published in the article.

LCLo - Lethal Concentration Low - "The lowest concentration of a substance, other than an LC50, in air, which has been reported to have caused death in humans or animals. The reported concentrations may be entered for periods of time which are less than 24 hours (acute) and greater than 24 hours (sub-acute and chronic)."

LC50 - Lethal Concentration Fifty - "A calculated concentration of a substance in air, exposure to which for a specified length of time will cause the death of 50% of an entire defined experimental animal population as determined from the exposure to the substance of a significant number from that population."

IRRITATION-EYE-SKIN - This describes the results of eye irritation or skin irritation tests, the value, effects, and severity of effect.

14.4.11.3 UNITS OF MEASUREMENT

Standard abbreviations are used, such as mg/kg (milligrams per kilogram). All body weight units have been converted to kilograms (kg) for uniformity.

When duration of exposure is available, it is presented as listed in the abbreviations list. Therefore, 10 mg/kg/3WI means "10 milligrams per kilogram body weight administered over a period of three weeks, intermittently, in a number of separate discrete doses."

14.4.11.4 TOXIC EFFECTS NOTATION

This notation in the toxicity data index strings has been added as TOXIC EFFECTS and is searchable using (IX). When searched, it prints as part of the Toxicity Data field using PRINT TOXDATA, or PRT TD.

In addition, the particular toxic effect, or organ system affected, is listed and is also searchable, using (IX). See Table of Abbreviations.

e.g. (IX) MUTAGENIC
(IX) CENTRAL NERVOUS SYSTEM
(IX) MUCOUS MEMBRANE

'PRT TOXDATA

14.4.12 TOXIC DATA SOURCE (SO)

This field has the RTECS Coden plus the name of the source, volume, page and year.

14.4.13 AQUATIC TOXICITY RATING (AQ)

Chemicals are rated on the basis of their toxicity to aquatic life. Finfish were selected as one of the most sensitive groups for which toxicological data are available, with information on shrimp and other aquatic organisms being used to fill in the gaps. The 96 hour TL_m test is the concentration of a substance which will within a specified period of time (generally 96 hours) kill 50% of the exposed test organisms. The concentration is usually expressed in parts per million (mg/l). The bioassay may be conducted under static or continuous flow conditions. This TL_m test was used to provide the basis for making five rankings of toxic potential. It was considered that if the substance would not be lethal according to this test at greater than 1,000 mg/l then it posed no major toxic hazard to aquatic life.

The system rankings are outlined below:

<u>Grade</u>	<u>Description</u>	<u>TL_m Concentration</u>
0	Insignificant hazard	>1,000 mg/l
1	Practically non-toxic	100-1,000 mg/l
2	Slightly toxic	10-100 mg/l
3	Moderately toxic	1-10 mg/l
4	Highly toxic	<1 mg/l

The information in the aquatic toxicity field has been extracted as uniterms, and is searchable using (TW), e.g.:

(TW) AQUATIC AND TOXICITY AND RATING

14.4.14 TOXICOLOGY AND CANCER REVIEW (TC)

Two types are cited: (a) the Threshold Limit Values which are recommended limits proposed by the American Conference of Governmental Industrial Hygienists (ACGIH) and (b) International Agency for Research on Cancer (IARC) monographs which are published by the World Health Organization. The information in this field has been textracted as uniterms, and is searchable using (TW):

SS 1 /C?

USER:

(TW) THRESHOLD AND LIMIT

PROG:

SS (1) PSTG (503)

SS 2 /C?

USER:

PRT 1 INCLUDE TC

PROG:

SI - NIOSH/AB1925000

N1 - ACETALDEHYDE

RN - 75-07-0

TC - THRESHOLD LIMIT VALUE-air:100 ppm DTLWS* "DOCUMENTATION OF THE THRESHOLD LIMIT VALUES FOR SUBSTANCES IN WORKROOM AIR," Supplements for those substances added or changed since 1971 - ,9,76

TC - TOXICOLOGY REVIEW EVHPAZ Environmental Health Perspectives, DHEW publication No. 11,163,75

SS 2 /C?

USER:

(TW) CARCINOGENIC AND DETERMINATION

SS (2) PSTG (425)

SS 3 /C?

USER:

PRT 1 INCLUDE TC

PROG:

SI - NIOSH/AB0900000

N1 - 5-ACENAPHTHENAMINE

RN - 4657-93-6

TC - CARCINOGENIC DETERMINATION:INDEFINITE IARC** IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. 16,243,78

14.4.15 STANDARDS AND REGULATIONS (SR)

Some standards proposed/recommended by:

- 1) OSHA (Occupational Safety and Health Act of 1970).
- 2) DOT (Substances regulated by the Department of Transportation)
- 3) EPA (Worker Protection Standards under Federal Insecticide, Fungicide and Rodenticide Act)
- 4) USOS (US Occupational Health Standard)

The information in this field has been extracted as uniterms, and is searchable using (TW), e.g.:

SS 3 /C?

USER:

(TW) OSHA AND STANDARD AND AIR

PROG:

SS (3) PSTG (598)

SS 4 /C?

USER:

PRT 1 INCLUDE SR

PROG:

SI - NIOSH/AB1925000

NI - ACETALDEHYDE

RN - 75-07-0

SR - OSHA STANDARD-air:TWA 200 ppm (SCP-V) FEREAC Federal Register.
39,23540,74

SR - DOT-FLAMMABLE LIQUID, LABEL:FLAMMABLE LIQUID FEREAC Federal Register. 41,57018,76

(The abbreviation SCP (Standards Completion Program) indicates that a draft technical statement has been developed under a NIOSH/OSHA program.)

SS 4 /C?

USER:

(TW) DOT AND LABEL

PROG:

SS (4) PSTG (871)

SS 5 /C?

USER:

PRT 1 INCLUDE SR

PROG:

SI - NIOSH/AB1925000

RN - 75-07-0

NI - ACETALDEHYDE

SR - OSHA STANDARD-air:TWA 200 ppm (SCP-V) FEREAC Federal Register
39,23540,74

SR - DOT-FLAMMABLE LIQUID, LABEL:FLAMMABLE LIQUID FEREAC Federal Register. 41,57018,76

Information after the DOT notation indicates (a) the hazard class, (b) label(s) required and (c) proper shipping name(s).

SS 6 /C?

USER:

(TW) EPA AND WORKER

PROG:

SS (6) PSTG (11)

SS 7 /C?

USER:

PRT 1 INCLUDE SR

PROG:

SI - NIOSH/I01575000

N1 - 1,4:5,8-DIMETHANONAPHTHALENE,
1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4a,5,6,7,8,8A-OCTAHYDRO-,
endo,endo-

RN - 72-20-8

SR - EPA:FARM WORKER FIELD REENTRY FEREAC Federal Register.
39,16888,74

SR - OSHA STANDARD-air:TWA 100 ug/m³ (Skin) (SCP-T) FEREAC Federal Register. 39,23540,74

SS 8 /C?

USER:

(TW) USOS

PROG:

SS (8) PSTG (17)

SS 9 /C?

USER:

PRT 1 INCLUDE SR

PROG:

SI - NIOSH/AB9450000

N1 - ACETAMIDE, N-FLUOREN-2-YL-

RN - 53-96-3

SR - USOS-carcinogen FEREAC Federal Register. 39,3756,74

14.4.16 NIOSH CRITERIA DOCUMENT (NC)

Recommended standards from NIOSH criteria documents are on approximately 500 records in the RTECS file. They can be viewed by entering PRINT INCLUDE NC. These can be retrieved by searching (TW) CRIT AND DOC.

SI - NIOSH/AF5250000

N1 - ACETIC ACID, BERYLLIUM SALT

RN - 543-81-7

NC - CRIT DOC. OCCUPATIONAL EXPOSURE TO BERYLLIUM Recm Std-Air:TWA2
ug(Be)/m³;Pk 25/30M NTIS** National Technical Information Service.

14.4.17 STATUS (ST)

This is the status of the chemical regarding NCI (National Cancer Institute) if tested for carcinogenicity by standard bioassay.

USER:
(TW) NCI

PROG:
SS (14) PSTG (408)

SS 15 /C?
USER:
PRT 1 INCLUDE ST

PROG:

SI - NIOSH/AB1060000
N1 - ACENAPHTHENE, 5-NITRO-
RN - 602-87-9
ST - NCI CARCINOGENESIS BIOASSAY COMPLETED AS OF FEB 1978

14.4.18 TEXTWORDS (TW)

Uniterms from the six free text fields, including Chemical Definition (CDEF), Aquatic Toxicity (AQ), Toxicology and Cancer Review (TC), Standards and Regulations (SR), NIOSH Criteria Document (NC), and Status (ST). These are searchable using (TW) but PRINT as the six specified fields.

14.4.19 CLASS OF COMPOUND (CC)

This field contains terms to describe the type of agent, plus a further breakdown for pesticides. This classification was developed by NIOSH. The terms/phrases which are directly searchable and printable are:

TABLE IV

AGRICULTURAL CHEMICAL	ACARICIDE
CARCINOGEN	AVICIDE
DRUG	FUNGICIDE
MUTAGEN	GERMICIDE
ORGANOMETALLIC	GROWTH REGULATOR
TERATOGEN	HERBICIDE
HORMONE	ATTRACTANT REPELLENT CHEMOSTERILANT
NATURAL PRODUCT	INSECTICIDE
MOLLUSCICIDE	
NEMATOCIDE	
RODENTICIDE	
UNCLASSIFIED	
EXPERIMENTAL PESTICIDE	
NO LONGER USED	

USER:
NBR AGRICULTURAL CHEMICAL

POSTINGS	TERM
2	AGRICULTURAL (NF)
645	AGRICULTURAL (CT)
2241	AGRICULTURAL CHEMICAL (CC)
1	AGRICULTURAL LIMESTONE (SY)
4	AGRICULTURE (TW)

UP N OR DOWN N?

USER:
FIND AGRICULTURAL CHEMICAL (CC)

14.4.20 CITATION TERMS (CT)

These are terms textracted from the source (SO) field.

Sample non-exhaustive searches are shown below.

SS 1 /C?
USER:
NEMAGON (SY)

PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
(IX) ORAL AND MOUSE

PROG:
SS (2) PSTG (5284)

SS 3 /C?
USER:
1 AND 2

PROG:
SS (3) PSTG (1)

SS 4 /C?
USER:
PRT TOXDATA INCLUDE CC

PROG:

SI - NIOSH/TX8750000
NI - PROPANE, 1,2-DIBROMO-3-CHLORO-
RN - 96-12-8
CC - AGRICULTURAL CHEMICAL
CC - CARCINOGEN
CC - NEMATOCIDE
CC - FUNGICIDE
SO - NCITR* National Cancer Institute Carcinogenesis Technical Report Series, NCI-CG-TR-28,78
TDKw- ORAL;MOUSE;RODENTS;TDLo;2400 mg/kg/40W-C ;TOXIC EFFECTS
CARCINOGENIC

ORAL;RAT;RODENTS;TDLo;3948 mg/kg/47W-C ;TOXIC EFFECTS
CARCINOGENIC

SO - JNCIAM Journal of the National Cancer Institute, 51,1993,73
TDKW- ORAL;MOUSE;RODENTS;TDLo;30 gm/kg/42W-I ;TOXIC EFFECTS

CARCINOGENIC

SO - GUCHAZ Guide to the Chemicals Used in Crop Protection, 6,172,73
TDKW- ORAL;MOUSE;RODENTS;LD50;257 mg/kg

SS 4 /C?

USER:

PRT DL COMPLETE

SI - NIOSH/TX8750000

NI - PROPANE, 1,2-DIBROMO-3-CHLORO-

RN - 96-12-8

TC - CARCINOGENIC DETERMINATION;ANIMAL POSITIVE IARC** IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man. 15,139,77

SR - OSHA STANDARD-air;TWA 1 ppb

NC - CRIT DOC. OCCUPATIONAL EXPOSURE TO DIBROMOCHLOROPROPANE recm std-air;CL 10 ppb/30M NTIS** National Technical Information Service

ST - NCI CARCINOGENESIS BIOASSAY COMPLETED;RESULTS POSITIVE:FINAL REPORT (NCITR*-NCI-CG-TR-28,78)

SY - BBC 12

SY - DBCP

SY - 1,2-DIBROM-3-CHLOR-PROPAN (German)

SY - 1,2-DIBROMO-3-CHLOROPROPANE

SY - 1,2-DIBROMO-3-CLORO-PROPANO (Italian)

SY - 1,2-DIBROOM-3-CHLORPROPAAN (Dutch)

SY - FUMAGON

SY - FUMAZONE

SY - FUMAZONE 86

SY - FUMAZONE 86E

SY - NCI-C00500

SY - NEMABROM

SY - NEMAFUME

SY - NEMAGON

CONTINUE PRINTING? (YES/NO)

USER:

Y

PROG:

SY - NEMAGON SOIL FUMIGANT

SY - NEMANAX

SY - NEMASET

SY - OS 1897

SY - SD 1897

MF - C3-H5-Br2-C1

MW - 236.35

WL - G1YE1E

CC - AGRICULTURAL CHEMICAL

CC - CARCINOGEN

CC - NEMATOCIDE

CC - FUNGICIDE

SO - TXAPA9 Toxicology and Applied Pharmacology. 3,545,61

TDKW- SKIN;RABBIT;RODENTS;IRRITATION;10 gm ;TOXIC EFFECTS;SEVERE EYE;RABBIT;RODENTS;IRRITATION;1% ;TOXIC EFFECTS;MILD

SO - 27ZTAP Gleason, et al., "Clinical Toxicology of Commercial Products-Acute Poisoning," 3rd ed., Baltimore, Williams and Wilkins, 1968 3,100,69

TDKW- ORAL;HUMAN;HUMANS;LDLo;5 mg/kg

SO - BESAAT Bulletin of the Entomological Society of America, 15,99,69

TDKW- ORAL;RAT;RODENTS;LD50; 173 mg/kg

SO - JNCIAM Journal of the National Cancer Institute, 51, 1993,73

TDKW- ORAL;RAT;RODENTS;TDLo;3800 mg/kg/40WI ;TOXIC EFFECTS;CARCINOGENIC

SO - SHELL* Shell Chemical Company, Technical Data Bulletin.

TDKW- INHALATION;RAT;RODENTS;LC50;103 ppm/8H

CONTINUE PRINTING? (YES/NO)

USER:

Y

PROG:

SO - GUCHAZ Guide to the Chemicals Used in Crop Protection. 6,172,73

TDKW- ORAL;MOUSE;RODENTS;LD50;257 mg/kg

SO - JNCIAM Journal of the National Cancer Institute, 51,1993,73

TDKW- ORAL;MOUSE;RODENTS;TDLo;30 gm/kg/42WI ;TOXIC EFFECTS;CARCINOGENIC

SO - TXAPA9 Toxicology and Applied Pharmacology. 3,545,61

TDKW- ORAL;RABBIT;RODENTS;LD50; 180 mg/kg

SKIN;RABBIT;RODENTS;LD50; 1400 mg/kg

SO - PCOC** Pesticide Chemicals Official Compendium, Association of The American Pesticide Control Officials, Inc. -,797,66

TDKW- ORAL;GUINEAPIG;RODENTS;LD50;150 mg/kg

SO - TXAPA9 Toxicology and Applied Pharmacology. 3,545,61

TDKW- ORAL;CHICKEN;BIRDS;LD50;60 mg/kg

SO - NCITR* National Cancer Institute Carcinogenesis Technical Report Series. NCI-CG-TR-28,78

TDKW- ORAL;MOUSE;RODENTS;TDLo;2400 mg/kg/40W-C ;TOXIC EFFECTS CARCINOGENIC

ORAL;RAT;RODENTS;TDLo;3948 mg/kg/47W-C;TOXIC EFFECTS CARCINOGENIC

SS 4 /C?

USER:

ERASEALL

PROG:

SS 1 /?

USER:

NEMAGON (SY)

PROG:

SS (1) PSTG (1)

SS 2 /C?

USER:

(IX) ORAL AND MOUSE

PROG:

SS (2) PSTG (5284)

SS 3 /C?

USER:

1 AND 2

PROG:

SS (3) PSTG (1)

SS 4 /C?

USER:

(IX) CARCINOGENIC OR NEOPLASTIC

PROG:

SS (4) PSTG (2226)

SS 5 /C?

USER:

3 AND 4

PROG:

SS (5) PSTG (1)

SS 6 /C?

USER:

PRT TOXDATA INCLUDE CC

PROG:

(Note: Only the "hits" in the Toxicity Data field print.)

SI - NIOSH/TX8750000

N1 - PROPANE, 1,2-DIBROMO-3-CHLORO-

RN - 96-12-8

CC - AGRICULTURAL CHEMICAL

CC - CARCINOGEN

CC - NEMATOCIDE

CC - FUNGICIDE

SO - NCITR* National Cancer Institute Carcinogenesis Technical Report Series. NCI- CG-TR-28,78

TDKW- ORAL;MOUSE;RODENTS;TDLo;2400 mg/kg/40W-C;TOXIC EFFECTS
CARCINOGENIC

ORAL;RAT;RODENTS;TDLo;3948 mg/kg/47W-C;TOXIC EFFECTS
CARCINOGENIC

SO - JNCIAM Journal of the National Cancer Institute. 51,1993,73

TDKW- ORAL;MOUSE;RODENTS;TDLo;30 gm/kg/42W-I ;TOXIC EFFECTS
CARCINOGENIC

SS 6 /C?

USER:

SAMPLE SEARCHES - (Eye Irritation)

SS 6 /C?

USER:

(IX) EYE AND IRRITATION AND SEVERE

PROG:

SS (6) PSTG (337)

SS 7 /C?

USER:

PRT TOXDATA 1

PROG:

SI - NIOSH/AA7680000

N1 - ACACIA (extract)

SO - AROPAW Archives of Ophthalmology. 78,384,67

TDKW- EYE;RABBIT;RODENTS;IRRITATION;36 mg/5H ;TOXIC EFFECTS;SEVERE

SS (7) /C?

USER:

(IX) EYE AND IRRITATION AND MODERATE

PROG:

SS (7) PSTG (42)

SS 8 /C?

USER:

PRT TOXDATA 1

PROG:

SI - NIOSH/CY1400000

N1 - BENZENE

RN - 71-43-2

SO - AMIHAB American Medical Association Archives of Industrial Health. 14,387,56

TDKW- EYE;RABBIT;RODENTS;IRRITATION;88 mg ;TOXIC EFFECTS;MODERATE

SS 8 /C?

USER:

(IX) EYE AND IRRITATION AND MILD

PROG:

SS (8) PSTG (81)

SS 9 /C?

USER:

PRT TOXDATA 1

PROG:

SI - NIOSH/AJ4375000

N1 - ACETIC ACID, SODIUM SALT

RN - 127-09-3

SO - BIOFX* BIOFAX Industrial Bio-Test Laboratories, Inc.,
Data Sheets. 19-3/71

TDKW- SKIN;RABBIT;RODENTS;IRRITATION;500 mg/24H ;TOXIC EFFECTS;MILD
EYE;RABBIT;RODENTS;IRRITATION;10 mg ;TOXIC EFFECTS;MILD

SS 9 /C?

USER:

SAMPLE SEARCHES: Skin/Eye Irritation (Humans)

SS 9 /C?

USER:

(IX) SKIN AND IRRITATION AND HUMANS

PROG:

SS (9) PSTG (94)

SS 10 /C?

USER:

PRT TOXDATA 1

PROG:

SI - NIOSH/AJ2450000

N1 - ACETIC ACID, PHENYL-, ALLYL ESTER

SO - FCTXAV Food & Cosmetics Toxicology. 15,611,77

TDKW- SKIN;HUMAN;HUMANS;IRRITATION;30 mg/48H

SKIN;RABBIT;RODENTS;IRRITATION;310 mg/kg/24H ;TOXIC EFFECTS
MODERATE

SS 10 /C?

USER:

(IX) EYE AND IRRITATION AND HUMANS

PROG:

SS (10) PSTG (43)

SS 11 /C?

USER:

PRT TOXDATA 1

PROG:

SI - NIOSH/AB1925000

N1 - ACETALDEHYDE

RN - 75-07-0

SO - JIHTAB Journal of Industrial Hygiene and Toxicology. 28,262,46

TDKW- EYE;HUMAN;HUMANS;IRRITATION;50 ppm/15M

SS 11 /C?

USER:

ALR -- allergenic effects
 AQTX -- aquatic toxicity
 BCM -- blood clotting mechanism effects
 bdw -- wild bird species
 BLD -- blood effects
 BPR -- blood pressure effects
 brd -- bird (domestic or lab)
 C -- continuous
 cc -- cubic centimeter
 CL -- ceiling concentration
 CAR -- carcinogenic effects
 cat -- cat
 chd -- child
 ckn -- chicken
 CNS -- central nervous system effects
 COR -- corrosive effects
 ctl -- cattle
 CRIT DOC -- criteria document
 CUM -- cumulative effects
 CVS -- cardiovascular effects
 D -- day
 dck -- duck
 DDP -- drug dependence effects
 DEF -- definition
 dog -- dog
 dom -- domestic
 DOT -- Department of Transportation
 EPA -- Environmental Protection Agency
 EYE -- eye effects
 frg -- frog
 GIT -- gastrointestinal tract effects
 GLN -- glandular effects
 gm -- gram
 gpg -- guinea pig
 grb -- gerbil
 H -- hour
 ham -- hamster
 hmn -- human
 I -- intermittent
 IARC -- International Agency for
 Research on Cancer
 iat -- intraarterial
 ial -- intraaural
 ice -- intracerebral
 icv -- intracervical
 idr -- intradermal
 idu -- intraduodenal
 ihl -- inhalation
 imp -- implant
 ims -- intramuscular
 inf -- infant
 ipc -- intraplacental
 ip1 -- intrapleural

ipr -- intraperitoneal
 irn -- intrarenal
 IRR -- irritant effects
 isp -- intraspinal
 itr -- intratracheal
 ivg -- intravaginal
 ivn -- intravenous
 kg -- kilogram (one thousand grams)
 LC50 -- lethal concentration 50 percent
 kill
 LCLo -- lowest published lethal concen-
 tration
 LD50 -- lethal dose 50 percent kill
 LDLo -- lowest published lethal dose
 mam -- mammal (species unspecified)
 man -- man
 M -- minute
 m3 -- cubic meter
 mg -- milligram₃ (one thousandth of a
 gram; 10⁻³ gm)
 mky -- monkey
 ml -- milliliter
 MMI -- mucous membrane effects
 mppcf -- million particles per cubic
 foot
 MSK -- musculo-skeletal effects
 MTH -- mouth effects
 mul -- multiple effects
 mus -- mouse
 MUT -- mutagenic effects
 NEO -- neoplastic effects
 ng -- nanogram (one billionth of a
 gram; 10⁻⁹ grams)
 ocu -- ocular
 orl -- oral
 OSHA -- Occupational Safety and Health
 Administration
 par -- parenteral
 pg -- picogram (one trillionth of a
 gram; 10⁻¹² gm)
 pgn -- pigeon
 pig -- pig
 Pk -- peak concentration
 PNS -- peripheral nervous system effect
 ppb -- parts per billion (v/v)
 pph -- parts per hundred (v/v) (percent)
 ppm -- parts per million (v/v)
 ppt -- parts per trillion (v/v)
 preg -- pregnancy
 PSY -- psychotropic effects
 PUL -- pulmonary system effects
 qal -- quail
 rat -- rat

BC -- red blood cell effects
bt -- rabbit
ec -- rectal
CP -- Standards Completion Program
cu -- subcutaneous
SKN -- skin effects
ql -- squirrel
up -- super script
SYS -- systemic effects
CLO -- lowest published toxic concentration
DLO -- lowest published toxic dose
ER -- teratogenic effects
FX -- toxic effects
LV -- threshold limit value
OX REV -- toxicology review
trk -- turkey
WA -- Time weighted average
XDS -- qualifying toxic dose
ug -- microgram₆ (one millionth of a gram; 10⁻⁶ gram)
unk -- unreported
JNS -- toxic effects unspecified
in source
JSOS -- U.S. Occupational Health Standard
w -- week
WBC -- white blood cell effects
wmn -- woman
Y -- year

14.6 RTECS CODEN SYSTEM

AABIAV	Annals of Applied Biology (London/New York)	AGEMAW	Annales de Gernbloux (Gernbloux, Belgium/Brussels)
AACHAX	Antimicrobial Agents and Chemotherapy (Detroit)	AGGHAR	Archiv fuer Gewerbepathologie und Gewerbehygiene (Heidelberg)
AACRAT	Anesthesia and Analgesia, Current Researches (Cleveland)	AGPPAP	Archiv fuer die Gesamte Physiologie des Menschen und der Tiere, Pfluegers (Berlin)
AANEAB	Acta Anaesthesiologica Scandinavica (Aarhus, Denmark)	AGSOA6	Agressologie (Paris)
AANLAW	Accademia Nazionale dei Lincei, Rendiconti della Classe di Scienze Fisiche, Matematiche e Naturali, Atti (Rome)	AHBAAM	Archiv fuer Hygiene und Bakteriologie (Munchen)
ABANAE	Antibiotics Annual, New York: Medical Encyclopedia, Inc.	AHRSAK	Archives Hospitalieres et Revue Science et Sante Reunies (Paris)
ABBIA4	Archives of Biochemistry and Biophysics (New York)	AHRTAN	Archiv za Higijenu Rada i Toksikologiju (English Translation: Archives of Industrial Hygiene and Toxicology, Belgrade), (Zagreb)
ABCHA6	Agricultural and Biological Chemistry (Tokyo)	AHYGAJ	Archiv fuer Hygiene (Munich)
ABEMAV	Annals of Biochemistry and Experimental Medicine (Calcutta)	AIBIAJ	Archivio de Instituto Biochimico Italiano (Milan)
ABHYAO	Abstracts on Hygiene (London)	AICCA6	Acta Unio Internationalis Contra Cancrum (Louvain, Belgium)
ABMGAJ	Acta Biologica et Medica Germanica (Berlin)	AIHAAP	American Industrial Hygiene Association Journal (Baltimore)
ABMHAM	Archives Belges de Medicine Sociale, Hygiene, Medicine du Travail et Medicine Legale (Brussels)	AIHAM*	Annual Meeting of American Industrial Hygiene Association
ACAEAS	Acta Anaesthesiologica (Padua, Italy)	AIHC**	American Industrial Hygiene Conference Abstracts
ACATAS	Acta Anatomica Nipponica (Tokyo)	AIHOAX	Archives of Industrial Hygiene and Occupational Medicine (Baltimore)
ACCR**	Army Chemical Center Report, Project No. 4-16-17-01, June 1949	AIHQAS	American Industrial Hygiene Association Quarterly (Baltimore) (changed to AIHAA)
ACCW**	Army Chemical Center, Md., Army Chemical Warfare Labs, CWLR 2027	AIMDAP	Archives of Internal Medicine (Chicago)
ACIOAZ	American Chemical Journal (Baltimore)	AIMEAS	Annals of Internal Medicine (Baltimore)
ACNSAX	Activitas Nervosa Superior (Prague).	AIPAAV	Annales de l'Institut Pasteur (Paris)
ACPAAN	Acta Paediatrica (Stockholm)	AIPHAI	Archives Internationales de Physiologie (Liege, Belgium)
ACRAAX	Acta Radiologica (Stockholm)	AIPTAK	Archives Internationales de Pharmacodynamie et de Therapie (Ghent, Belgium)
ACRSAJ	Advances in Cancer Research (New York)	AIPUAN	Archivio Italiano di Patologia e Clinica dei Tumori (Milan)
ACVIA9	Acta Vitaminologica (Milan)	AISFAR	Archivio Italiano di Scienze Farmacologiche (Modena, Italy)
ADCSAJ	Advances in Chemistry Series (Washington, D.C.)	AISSAW	Istituto Superiore di Sanita, Annali (Rome)
ADENAE	Advances in Enzymology & Related Subjects in Biochemistry (New York)	AITDAQ	Archiwum Immunologii i Terapii Doswiadczennej (Warsaw)
ADSYAF	Archives of Dermatology and Syphilology (Chicago)	AJANA2	American Journal of Anatomy (Philadelphia)
ADTEAS	Advances in Teratology (London)	AJCAA7	American Journal of Cancer (Baltimore/New York)
AECS**	Atomic Energy Commission Symposium	AJCPAI	American Journal of Clinical Pathology (Baltimore)
AEHA**	U.S. Army Environmental Hygiene Agency, (Edgewood Arsenal, Md.)	AJDCAI	American Journal of Diseases of Children (Chicago)
AEHLAU	Archives of Environmental Health (Chicago)	AJDNAH	American Journal of Digestive Diseases and Nutrition (New York)
AEPPAE	Naunyn-Schmiedebergo Archiv fuer Experimentelle Pathologie und Pharmakologie	AJDRAT	Australian Journal of Dermatology
AESPA2	Aerospace (Washington, D.C.)	AJEBAK	Australian Journal of Experimental Biology and Medical Science (Adelaide, Australia)
AEXPBL	Archiv fuer Experimentelle Pathologie und Pharmakologie (Berlin)	AJHEAA	American Journal of Public Health (New York)
AFDOAQ	Association of Food and Drug Officials of the United States, Quarterly Bulletin (Austin, Texas)	AJHYA2	American Journal of Hygiene (Baltimore)
AFOAR*	U.S. Air Force, Office of Aerospace Research (Arlington, Va.)	AJMSA9	American Journal of the Medical Sciences (Philadelphia)
AFPEAM	Archiv Francaises de Pediatrie (Paris)		
AFREAW	Advances in Food Research (New York)		
AFSPA2	Archivio Di Farmacologia Sperimentale E Scienze Affini (Rome/Siena) Italy		

AJOGAH	American Journal of Obstetrics and Gynecology (St. Louis)	APBDAJ	Archiv der Pharmazie und Berichte der Deutschen Pharmazeutischen Gesellschaft (Weinheim, Germany)
AJPAA4	American Journal of Pathology (New York/Boston)	APEPA2	Naunyn-Schmiedebergs Archiv fuer Pharmakologie und Experimentelle Pathologie (Leipzig)
AJPHAP	American Journal of Physiology (Washington/Baltimore/Boston)	APFRAD	Annales Pharmaceutiques Francaises (Paris)
AJPSAO	American Journal of Psychiatry (Baltimore)	APIM**	American Petroleum Institute Monograph
AJSGA3	American Journal of Syphilis, Gonorrhea, and Venereal Diseases (St. Louis)	APJAAG	Acta Pathologica Japonica (Tokyo)
AJTHAB	American Journal of Tropical Medicine and Hygiene (Baltimore)	APJUA8	Acta Pharmacentica Jugoslavica (Zagreb, Yugoslavia)
AJTMAQ	American Journal of Tropical Medicine (Baltimore)	APMBAY	Applied Microbiology (Baltimore)
AVRAH	American Journal of Veterinary Research (Chicago)	APMIAL	Acta Pathologica et Microbiologica Scandinavica (Copenhagen)
AKNSR*	Akademiya Nauk. S.S.S.R.	APPBAF	Annales de Physiologie et de Physicochimie Biologique (Paris)
ALCC**	Agricultural Division Bulletin, General Chemical Division, Allied Chemical Corporation	APPHAX	Acta Poloniae Pharmaceutica (English Translation: Bimonthly of the Polish Pharmaceutical Society, Washington) (Warsaw)
ALLVAR	Alimentation et La Vie (Paris)	APPNAH	Acta Physiologica et Pharmacologica Neerlandica (Amsterdam)
ALPIA8	Abbott Laboratories, Indexing Report (Chicago)	APRCAS	American Perfumer and Cosmetics (Oak Park, Illinois)
AMAHAS5	Acta Microbiologica (Budapest)	APSCAX	Acta Physiologica Scandinavica (Stockholm)
AMCTAH	Antibiotic Medicine & Chemical Therapy (New York)	APST**	Abstracts of papers, society of Toxicology, 14th Annual Meeting, Williamsburg, Va. March 9-13, 1975
AMIHAB	American Medical Association Archives of Industrial Health (Chicago)	APSXAS	Acta Pharmaceutica Suecica (Stockholm) or Svenska Farmaceut. Tidskrift
AMIHBC	American Medical Association Archives of Industrial Hygiene and Occupational Medicine (Chicago)	APTOA6	Acta Pharmacologica et Toxicologica (Copenhagen)
AMJPA6	American Journal of Pharmacology (Philadelphia)	APTSAI	Acta Pharmacologica et Toxicologica, Supplementum (Copenhagen)
AMMJAA3	Anais de Microbiologia, Instituto de Microbiologia, Universidade do Brasil (Rio de Janeiro)	APTUAO	Archives de' Institut Pasteur de Tunis (Tunis)
AMOKAG	Acta Medicina Okayama (Okayama, Japan)	APYAAAN	Archiv fuer Anatomie und Physiologie, Physiologische Abteilung (Berlin)
AMPMAR	Archives Des Maladies Professionnelles De Medecine Du Travail et de Securite Sociale (Paris)	APYPAY	Acta Physiologica Polonica (Warsaw)
AMPYAT	Annals Medico-Psychologiques (Paris)	ARANT*	Archives of Anatomy
AMRL**	Aerospace Medical Research Laboratory, WPAFB (Ohio)	ARBIAE	Archives of Biochemistry (New York)
AMSGAQ	AMA Archives of Surgery (Chicago) (Formerly Arch. Surg. (Chicago))	ARDEAC	Archives of Dermatology (Chicago)
AMSHAR	Acta Morphologica Academiae Scientiarum Hungaricae (Budapest)	ARDSAK	Archiv fuer Dermatologie und Syphilis (Berlin)
AMSSAQ	Acta Medica Scandinavica, Supplement (Stockholm)	ARDSBL	American Review of Respiratory Disease (New York)
AMSVAZ	Acta Medica Scandinavica (Stockholm)	ARENAA	Annual Review of Entomology (Stanford, California)
AMUK**	Acta Medica University Kioto (Kioto, Japan)	ARGEAR	Archiv fuer Geschwulstforschung (Dresden, Germany)
ANAEA3	Annals of Allergy (St. Paul)	ARGHA2	Arbeiten Aus Dem Reichsgesundheitsamte (Berlin)
ANASAB	Anaesthesia (London)	ARGSAZ	Arbeit und Gesundheit (Stuttgart)
ANATAE	Anaesthetist (Berlin)	ARHEAW	Arthritis and Rheumatism (New York)
ANESAV	Anesthesiology, American Society of Anesthesiologists (Philadelphia)	ARNEAS	Archives of Neurology (Chicago)
ANPBAZ	Acta Neurologia et Psychiatrica Belgica (Brussels)	AROPAW	Archives of Ophthalmology (Chicago)
ANREAK	Anatomical Record (Philadelphia)	AROTAA	Archives of Otolaryngology (Chicago)
ANTBAL	Antibiotiki, (English Translation: Antibiotics, New York) (Moscow)	ARPAAQ	Archives of Pathology (Chicago)
ANTCAO	Antibiotics and Chemotherapy (New York)	ARPIAG	Archiv fuer Physiologie (Leipzig)
ANYAA9	Annals of the New York Academy of Sciences (New York)	ARSIM*	Agricultural Research Service, USDA Information Memorandum
ANZJA7	Australian and New Zealand Journal of Surgery (Melbourne)	ARSMA9	American Review of Soviet Medicine (New York)
AOHYA3	Annals of Occupational Hygiene (Oxford/New York)	ARTREL	Annual Reports, Takeda Research Lab.
APACAB	Acta Physiologica Academiae Scientiarum Hungaricae (Budapest)	ARTUA4	American Review of Tuberculosis (New York)
APAVAY	Virchows Archiv fuer Pathologische, Anatomia und Physiologie, und fuer Klinische Medizin (Berlin)	ARVPAX	Annual Review of Pharmacology (Palo Alto, California)
		ARZNAD	Arzneimittel-Forschung (Aulendorf, Germany)
		ARZWA6	Aerztliche Wochenschrift (Berlin)
		ASBIAL	Archivio de Scienze Biologiche (Bologna)
		ASBMAX	Annales de la Societe Belge de Medicine Tropicale (Antwerp, Belgium)

ASBUAN	Archives des Sciences Biologiques (Leningrad)	BMRII*	Patty, F. A., and W. P. Yant, U.S. Bureau of Mines Report of Investigation No. 2979 (1929)
ASCHAN	Anzeiger fuer Schaedlingshunde (Hamburg)	BOTZA9	Botanicheskii Zhurnal (Leningrad)
ASLBAG	Atti Bella Societa Lombarda Di Scienze Mediche E. Biologiche (Milan)	BRAIAK	Brain, A Journal of Neurology (London)
ASVMAV	Abstracts of Soviet Medicine (Amsterdam)	BSBSAS	Boletin de la Sociedad de Biologia de Santiago de Chile (Santiago)
ATMPA2	Annals of Tropical Medicine and Parasitology (Liverpool)	BSCFAS	Bulletin de la Societe Chimique de France (Paris)
ATORAI	A.P.I. Toxicological Review American Petroleum Institute, (New York)	BSCIA3	Bulletin de la Societe de Chimie Biologique (Paris)
ATSYAP	Anesthesiology (Amsterdam)	BSIBAC	Bollettino della Societe Italiana di Biologia Sperimentale (Naples, Italy)
ATXKA8	Archiv fuer Toxikologie (Berlin)	BSMHAG	Bulletin de la Societe Medecine de Hospital de Paris (Paris)
AUPJB7	The Australian Pediatric Journal (Melbourne)	BSPHAV	Bulletin des Sciences Pharmacologiques (Paris)
AVBNAM	Arhiv Bioloskih Nauka (Belgrade)	BSPII*	The Society of the Plastics Industry, Inc., "Commercial Organic Peroxide Toxicological Data for Users & Vendors of Organic Peroxides" by Organic Peroxide Producers Safety Division
AVSCM*	Advances in Veterinary Sciences & Comparative Medicine (Ed. C. A. Brandly, and C. E. Cornelius), Vol. 13, 1969	BSPMAC	Bulletin de la Societe da Pharmacie de Marseille (Marseille, France)
AVSUAR	Acta Dermato-Venereologica, Supplementum (Stockholm)	BTSRAF	Biochimica e Terapia Sperimentale Societa Italiana di Chimica e Biologica (Modena, Italy)
BAFEAG	Bulletine de l'association Francaise pour l'Etude du Cancer (Paris)	BUCABS	Bulletin du Cancer: Formerly Bulletine de l'association Francaise pour l'Etude du Cancer (Paris)
BANMAC	Bulletin de l'Academie Nationale de Medicine (Paris)	BVJOA9	British Veterinary Journal (London)
BBKCA8	Beitraege zur Klinischen Chirurgie (Munich)	BWHOA6	Bulletin of the World Health Organization (Geneva/New York)
BBMS**	Bovet, D., and F. Bovet-Nitti, "Medicaments du Systeme Nerveux Vegetatif," S. Karger: New York (1948)	CALEDQ	Cancer Letters
BCFAAI	Bollettino Chimicofarmaceutico (Milan)	CANCAR	Cancer (Philadelphia)
BCPCA6	Biochemical Pharmacology (Oxford/New York)	CANJAE	Canadian Anaesthetist's Society Journal (Toronto)
BDCGAS	Berichte der Deutschen Chemischen Gesellschaft (Leipzig/Berlin)	CBCCT*	Chemical Biological Coordination Center, Summary Biological Tests, National Research Council (Washington, D.C.)
BEASA*	Bruxelles: Editions Arsica, S.A. (1961)	CBINA8	Chemico-Biological Interactions (Amsterdam)
BECCAN	British Empire Cancer Campaign Annual Report (London)	CBTIAE	Boyce Thompson Institute for Plant Research, Contributions (Yonkers, New York)
BECTA6	Bulletin of Environmental Contamination and Toxicology (New York)	CCCCAK	Collection of Czechoslovak Chemical Communications (Prague)
BESAAT	Bulletin of the Entomological Society of America (Baltimore/Washington)	CCPNAG	Canadian Cancer Society, British Columbia Division, Provincial News
BEXBAN	Bulletin of Experimental Biology & Medicine (New York)	CCPTAY	Contraception (Los Altos, California)
BGTMAG	Bulletin General de Therapeutique Medicale (Paris)	CCROBU	Cancer Chemotherapy Reports, Part 1 (Bethesda, Maryland)
BHJUAV	British Heart Journal (London)	CCSUBJ	Cancer Chemotherapy Reports, Part 2 (Bethesda, Maryland)
BIBIAU	Biotechnology and Bioengineering (New York)	CCWI**	Carlisle Chemical Works, Inc., Technical Bulletin
BIJOAK	Biochemical Journal (London/New York)	CCYPBY	Cancer Chemotherapy Reports, Part 3, Program Information (Bethesda, Maryland)
BIOFX*	BIOFAX Industrial Bio-Test Laboratories, Inc., (Northbrook, Illinois)	CDEST*	Chemical Defense Establishment (Ottawa)
BIZEA2	Biochemische Zeitschrift (Berlin)	CENEAR	Chemical and Engineering News (Washington, D.C.)
BJANAD	British Journal of Anesthesia (Manchester)	CHABA8	Chemical Abstracts (Columbus, Ohio)
BJCAAI	British Journal of Cancer (London)	CHBEAM	Chemische Berichte (Weinheim, Germany)
BJDEAZ	British Journal of Dermatology (London)	CHDDAT	Comptes Rendus de l'Academie des Sciences [D] (Paris)
BJEPA5	British Journal of Experimental Pathology (London)	CHEP**	Clinical Handbook on Economic Poisons, U.S. DHEW. PHS Toxicol. Section (Atlanta, Georgia)
BJIMAG	British Journal of Industrial Medicine (London)	CHIMA*	Chim. Acta
BJPCAL	British Journal of Pharmacology and Chemotherapy (London)	CHINAG	Chemistry and Industry (London)
BJPCBM	British Journal of Pharmacology (London)	CHREAY	Chemical Reviews (Washington, D.C.)
BJPYAJ	British Journal of Psychiatry (London)	ChrHE#	Personal Communication to Editor, Toxic Substances List, from Christensen, H. E., 6515 Callander Drive, Bethesda, Maryland 20034
BKNJAS	Biken Journal (Osaka, Japan)	CHTPBA	Chimica Therapeutica (Arcueil, France)
BKOBAK	Bitki Koruma Buletini (Ankara, Turkey)		
BKWOAV	Berliner Klinische Wochenschrift Organ fuer Praktische Aerzte (Berlin)		
BKZHAP	Biokhimichni Zhurnal (Kiev)		
BLCS**	Bladder Cancer, A Symposium Aesculapius Publishing Co., (Birmingham, Alabama, U.S.A.)		
BLLIAX	Bratislavskie Lekarske Listy (Bratislava)		
BLOOAW	Blood (New York)		
BMJOAE	British Medical Journal (London)		

CIGZAF	Chiba Igakkai Zasshi (Chiba, Japan)	CUSCAM	Current Science (Bangalore, India)
CITOX*	Elkins, H. B., <i>The Chemistry of Industrial Toxicology</i> , 2nd edition, New York Wiley, 1959.	CWARC*	Chemical Warfare Agents and Related Chemical Problems, Volume 1, page 7-16, National Defense Research Center, 1946
CJBIAE	Canadian Journal of Biochemistry (Ottawa)	CWLTM*	Chemical Warfare Laboratories Technical Memorandum
CJBPAZ	Canadian Journal of Biochemistry and Physiology (Ottawa)	DAKMAJ	Deutsches Archiv fuer Klinische Medizin (Munich)
CJCHAG	Canadian Journal of Chemistry (Ottawa)	DANKAS	Doklady Akademii Nauk (Moscow)
CJCMAV	Canadian Journal of Comparative Medicine (Quebec)	DCINAQ	Drug and Cosmetic Industry. The Magazine of Manufacturing, Formulation, Research, Packaging, and Selling Defense Documentation Center (Alexandria, Virginia)
CJMSAV	Canadian Journal of Research, Section E, Medical Sciences (Ottawa)	DDCEN*	Deutsche Gesundheitswesen (Berlin)
CJPEA4	Canadian Journal of Public Health (Toronto)	DEGEA3	Deutsche Forschungsgemeinschaft, Kommission zur Pruefung Fremder Stoffe bei Lebensmitteln, Mitteilung (Bonn)
CJPPA3	Canadian Journal of Physiology and Pharmacology (Ottawa)	DFSGA8	Deutsch Medizinische Wochenschrift (Stuttgart, Germany)
CJSUAX	Canadian Journal of Surgery (Toronto)	DMWOAX	Diseases of the Nervous System, Supplement (Irvington, New Jersey)
CJTEAO	Canadian Journal of Technology (Ottawa)	DNSSAW	Diseases of the Nervous System (Irvington, New Jersey)
CKFRAY	Ceskoslovenska Farmacie (Prague)	DNSYAG	Dow Chemical Company (Midland, Michigan)
CLDND*	A Compilation of LD ₅₀ Values of New Drugs; J. R. MacDougal, Department of National Health & Welfare, Food & Drug Divisions, 35 John Street, Ottawa, Ontario	DOWCC*	Dissertationes Pharmaceuticae et Pharmacologicae (Warsaw)
CLPTAT	Clinical Pharmacology and Therapeutics (St. Louis)	DPHFAK	Drug Standards (Washington, D.C.)
CMAJAX	Canadian Medical Association Journal (Toronto)	DRSTAT	Documentation of Threshold Limit Values for Substances in Workroom Air, Cincinnati, Ohio, Amer. Conf. of Governmental Industrial Hygienists, 1971
CMDT**	Dr. H. Christensen's Thesis, National Institute for Occupational Safety and Health, Rockville, Maryland 20852	DTLVS*	“Documentation of the Threshold Limit Values for Substances in Workroom Air,” Supplements for Those Substances Added or Changed Since 1971
CMEP**	“Clinical Memoranda on Economic Poisons,” U.S. Dept. HEW, Public Health Service, Communicable Disease Center, Atlanta, Georgia 1956	DTLWS*	E. I. DuPont de Nemours and Company, Technical Sheet (Wilmington, Delaware)
CMJOAP	Chinese Medical Journal (Peking)	DUPON*	Osol and Farrer, Dispensatory of the U.S.A., 25th Edition, J. B. Lippencott Company (Philadelphia)
CMTRAG	Chemotherapia (Basel)	DUSA**	Deutsche Zeitschrift fuer die Gesamte Gerichtliche Medizin (Heidelberg)
CNCRA6	Cancer Chemotherapy Reports (Bethesda, Maryland)	DZGGAK	Department of the Army, Edgewood Arsenal Technical Report EB-TR-73040, April, 1974
CNREA8	Cancer Research (Chicago/Baltimore)	EATR**	Personal Communication from A. G. Ebert, International Glutamate Technical Committee, 85 Walnut Street, Watertown, Massachusetts 02172
COAN**	M. M. Shemyakin, and A. S. Khokhlov, Khimiya Antibiotikov (Chemistry of Antibiotics)	EbeAG#	Etude experimentale de la glycozymylation gravidaque et de l'action teratogene des perturbations due metabolisme glucidique, Paris: Masson et Cie, 1961
CONEAT	Confinia Neurologica (Basel)	EETPM*	European Journal of Cancer (Oxford) · European Journal of Medicinal Chemistry — Chimica Therapeutica
COREAF	Comptes Rendus Hebdomadaires des Seances, Academie des Sciences (Paris)	EJCAAH	European Journal of Pharmacology (Amsterdam)
CPAJAK	Canadian Psychiatric Association Journal (Ottawa)	EJMCA5	Eli Lilly and Company, “Research Today,” Volume V, 1949
CPBTAL	Chemical and Pharmaceutical Bulletin (Tokyo)	ELCRT*	Experimental Medicine & Surgery (New York)
CPCHAO	Clinical Proceedings of Children's Hospital (Washington, D.C.)	EMSUA8	Endocrinology (Springfield, Illinois)
CPEDAM	Clinical Pediatrics (Philadelphia)	ENDOAO	Environmental Research (New York/London)
CPJOAC	Canadian Pharmaceutical Journal (Toronto)	ENVRAL	Coulston, F. “Environmental Quality and Safety,” Supplement Volume IV, Georg Thieme Publishers, 1975 (Stuttgart)
CRAAA7	Current Researches in Anesthesia and Analgesia (Cleveland)	EQSSDX	Ernaehrungsforschung (Berlin)
CRDL**	Chemical Research and Development Laboratory, U.S. Army (Edgewood Arsenal, Maryland)	ERNFA7	Environmental Health Perspectives, DHEW Publication No. (NIH)74-218, U.S. Department of Health, Education
CRSAAT	Competes Rendus Des Seances De L'Academie Des Sciences (Paris)	EVHPAZ	and Welfare
CRSBAW	Comptes Rendus des Seances de la Societe de Biologie et de Ses Filiales (Paris)		
CRSSAF	Comptes Rendus des Seances de la Societe de Biologie (Paris)		
CRTOX*	Critical Reviews Toxicology CRC Press, Inc.		
CSMA**	Proceedings of the 47th Mid-year Meeting of the Chem. Specialties Manufacturing Association		
CTCEA9	Current Therapeutic Research, Clinical, and Experimental (New York)		
CTOXAO	Clinical Toxicology (New York)		
CURL**	Chicago University Radiation Laboratory (Chicago)		

EXMPA6	and Welfare, Public Health Service, National Institute of Health	GRMMAB	German Medical Journal (Stuttgart) (English Translation of DMWOAX)
EXPAAA	Experimental and Molecular Pathology (New York)	GROWAH	Growth (Philadelphia)
EXPEAM	Experimental Parasitology (New York)	GTNIAI	Geneeskundig Tijdschrift voor Nederlandsch-Indie (Djakarta)
EXPTAX	Experientia (Basel)	GTPZAB	Gigiena Truda i Professional'nye Zabolevaniiia (Moscow)
FAONAU	Experimentelle Pathologie (Jena)	GUCHAZ	Guide to the Chemicals Used in Crop Protection (London/Ontario)
	Food & Agriculture Organization of United Nations, Report, Series (Washington, D.C.)	GUTTAK	Gut (London)
FARVAZ	Farmakologija Alkaloidov (Tashkent, U.S.S.R.)	HAOP**	Health Aspects of Poisoning
FATOAO	Farmakologija i Toksikologija, (English Translation: Pharmacology and Toxicology, New York) (Moscow)	HarPN#	Personal Communication to Henry Lau, Tracor Jitco, from Paul N. Harris, M.D., Eli Lily Co., Greenfield, Indiana, 46140
FAZMAE	Fortschritte der Arzneimittelforschung, Ed. by E. Jucker, Basel: Birkhauser Verlag, 1963	HAZL**	Hazelton Laboratories, Inc., (Falls Church, Va.)
FCTC**	Clayton, Jr., J. W. (1970), <i>Fluorocarbon Toxicology</i> , Ed. Proc. Appl. Semin.	HBAMAK	Handbuch der Biologischen Arbeitsmethoden (Leipzig)
FCTXAV	Food and Cosmetics Toxicology (Oxford/New York)	HBTXAC	Handbook of Toxicology, Volumes II-V, W. B. Saunders Co. (Philadelphia)
FDADF*	Food and Drug Administration Data File (Washington, D.C.)	HCACAV	Helvetica Chimica Acta (Basel)
FEPRAS7	Federation Proceedings, Federation of American Societies for Experimental Biology (Washington, D.C.)	HDMA**	Handling Manual, Section XI Oxygenated Solvents
FEREAC	Federal Register (Washington, D.C.)	HDTX**	Handbuch der Toxikologie
FerJJ#	Personal Communication to NIOSH From J. J. Ferry, Area Manager, Industrial & Environmental Hygiene, General Electric Company (Schenectady, New York)	HHER**	Health Hazard Evaluation Report 71-20, Div. Tech. Sves. June 1973
FESTAS	Fertility & Sterility (New York)	HINAAU	Hindustan Antibiotics Bulletin (India)
FHFI**	Fenaroli's Handbook of Flavour Ingredients, Chemical Rubber Co., (Cleveland, Ohio), 1971	HINEL*	Hine Laboratories for U.S. Air Force (San Francisco)
FHPAA*	Folia Hered. et Pathol. (Milan)	HLSCAE	Health Laboratory Science (Albany, New York/New York)
FKIZA4	Fukuoka-Igaku-Zasshi (Fukuoka Acta Medica) (Fukuoka, Japan)	HOCC**	Hooker Chemical Corporation (Niagara Falls, New York)
FLABAZ	Fluoride Abstracts, Supplement to the Annotated Bibliography, the Occurrence and Biological Effects of Fluorine Compounds, Volume 1; Inorganic Compounds	HOIS**	Handbook of Organic Industrial Solvents, National Association of Mutual Casualty Co. (Chicago, Illinois)
FLCRAP	Fluorine Chemistry Reviews (New York)	HPAOAM	Heating, Piping, and Air Conditioning (Chicago)
FMCHA2	Farm Chemicals Handbook, G. L. Berg, (Ed.), Meister Publishing Co. (Willoughby)	HPPAAL	Helvetica Physiologia and Pharmacologica Acta (Basel)
FMDZAR	Fortschritte der Medizin (Munich)	HSZPAZ	Hoppe-seyler's Zeitschrift fuer Physiologische Chemie (Berlin)
FNUAS	Farmacia Nueva (Madrid)	HUMAA7	Humangenetik
FOMAAB	Food Manufactures (London)	HURC**	Huntingdon Research Center (Baltimore, Maryland 21204)
FOMDAK	Folia Medica (Naples)	HXPHAU	Handbuch der Experimentellen Pharmakologie
FOREAE	Food Research (Champaign)	HYDC**	Zhilova, N. A., and A. A. Kaspakov, "Hygienic Problems Involved in Large-Scale Development of Chemistry Materials." Scientific Conference of the First Moscow Medical Institute (Sechenov) (July, 1964)
FRPPAO	Il Farmaco — Edizione Practica (Italy)	HYSAAV	Hygiene and Sanitation: English Translation of Gigiena Sanitariya (Springfield, Virginia)
FRPSAX	Farmaco, Edizione Scientifica (Paria, Italy)	IAANBS	Internationales Archiv Fuer Arbeitsmedizin (Berlin)
FTNZAO	Food Technology in New Zealand (Auckland, New Zealand)	IARC**	International Agency for Research on Cancer Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man (Lyon)
FTSEAK	Fette und Seifen (Vienna)	IASKA6	Izvestiia Akademii Nauk, S.S.S.R., Seriia Khimicheskaiia (Moscow)
FZPAAZ	Frankfurter Zeitschrift fuer Pathologie (Munich)	ICTOM*	Pesticides Symposia Interamerican Conference on Toxicology and Occupational Medicine.
GANMAX	Gann Monograph	IDZAAW	Japanese Journal of Genetics (Tokyo)
GANNA2	Japanese Journal of Cancer Research (Tokyo)	IECHAD	Industrial and Engineering Chemistry (Washington, D.C.)
GASTAB	Gastroenterology (Baltimore)	IGIBAS	Ingiena (Bucharest)
GIFT**	Gigiena i fiz, Truda, Pro. Toksikol. Klin (U.S.S.R.) (English Translation: Hygiene and Physiology of Labor, Industrial Toxicology and Clinical Aspects)	IGSBAK	Medicine and Biology (Tokyo)
GIOK**	Gigiena i Otsenka Khim. Faktorov Vnesh. Spedy (U.S.S.R.) (English Translation: Hygiene and Evaluation of Chemical Factors of the External Environment)	IHFCAY	Industrial Hygiene Foundation of America, Chemistry and Toxicology Series Bulletin (Pittsburgh)
GISAAA	Gigiena i Sanitariya (English Translation is HYSAAV) (U.S.S.R.)		
GRCSB*	Service Bulletin, Goodrich Co.		

IHFMAU	Industrial Hygiene Foundation of America, Medical Series, Bulletin (Pittsburgh)	JCENA4	Journal of Clinical Endocrinology (Springfield, Illinois)
IHGBB3	Industrial Hygiene Bulletin, New York State, Department of Labor (New York)	JCINAO	Journal of Clinical Investigation (Boston/New Haven)
IHYDAU	Industrial Hygiene Digest (Pittsburgh)	JCPCBR	Journal of Clinical Pharmacology
IIFBA4	Izvestia na Instituta po Fiziologii, Bulgarska Akademiya na Naukite (Sofia)	JCPHB8	Journal of Clinical Pharmacology and Journal of New Drugs (Albany, New York)
IJCAAR	Indian Journal of Cancer (Bombay)	JCREA8	Journal of Cancer Research (Baltimore)
IJCNAW	International Journal of Cancer (Copenhagen)	JCSOA9	Journal of the Chemical Society (London)
IJLEAG	International Journal of Leprosy (Washington, D.C.)	JCPVAR	Journal of Comparative Pathology (Liverpool)
IJMDAI	Israel Journal of Medical Sciences (Jerusalem)	JDREAF	Journal of Dental Research (Chicago)
IJMRAQ	Indian Journal of Medical Research (Calcutta/Delhi)	JEBIAM	Journal of Experimental Biology (London)
IJNEAQ	International Journal of Neuropharmacology (Oxford/New York)	JEEMAF	Journal of Embryology and Experimental Morphology (London)
IJRBA3	International Journal of Radiation Biology, and Related Studies in Physics, Chemistry, and Medicine (London)	JEENAI	Journal of Economic Entomology (Washington, D.C.)
IMSUAT	Industrial Medicine and Surgery (Chicago/Miami)	JEMEAV	Journal of Experimental Medicine (New York)
INDBBU	Industrial Bulletin (Chicago)	JETOAS	Journal European de Toxicologie (Paris)
INDI**	Reus, K. J.: Inaugural Dissertation (Wurzburg, 1933)	JFALAX	Journal of the Faculty of Agriculture, Tottori University, (Tottori, Japan)
INHEAO	Industrial Health (Kawasaki, Japan)	JGMIAN	Journal of General Microbiology (London/New York)
INMEAF	Industrial Medicine (Chicago)	JHEMA2	Journal of Hygiene, Epidemiology, Microbiology and Immunology (Prague)
INPHB6	International Pharmacopsychiatry (Basel/New York)	JHHBAI	Bulletin of the Johns Hopkins Hospital (Baltimore)
INURAQ	Investigative Urology (Baltimore)	JHMJAX	Johns Hopkins Medical Journal (Baltimore)
IRGGAJ	Internationales Archiv fuer Gewerbeopathologie und Gewerbehygiene (Heidelberg)	JIDAE	Journal of Investigative Dermatology (Baltimore)
IRMEA9	International Record of Medicine (New York)	JIDHAN	Journal of Industrial Hygiene (Baltimore/New York)
IVETS*	Institute of Veterinary Sanitation	JIHTAB	Journal of Industrial Hygiene and Toxicology (Baltimore/New York)
IZSBAI	Izvestia Sibirsogo Otdeleniya Akademii Nauk S.S.R., Seriia Biologomeditinskikh Nauk (Novosibirsk)	JISMAB	Journal of the Iowa State Medical Society (Des Moines)
IZVIAK	International Review of Vitamin Research (Bern)	JJANAX	Japanese Journal of Antibiotics (Tokyo)
JACSAT	Journal of the American Chemical Society (Washington, D.C.)	JJEMAG	Japanese Journal of Experimental Medicine (Tokyo)
JAFCAU	Journal of Agricultural and Food Chemistry (Washington, D.C.)	JPPAAZ	Japanese Journal of Pharmacology (Tokyo)
JAGSAF	Journal of the American Geriatrics Society (Baltimore)	JJPHAM	Japanese Journal of Physiology (Kyoto)
JAIHAQ	Journal of the American Institute of Homeopathy (Philadelphia)	JLACBF	Justus Leibigs Analen der Chemie (Leipzig)
JAJAAA	Journal of Antibiotics, Series A (Tokyo)	JLCMAK	Journal of Laboratory and Clinical Medicine (St. Louis)
AJBAD	Journal of Antibiotics, Series B (Tokyo)	JMCMAR	Journal of Medicinal Chemistry (Washington, D.C.)
JAMAAP	Journal of the American Medical Association (Chicago)	JMJOAY	Japanese Medical Journal (Tokyo)
JANTAJ	Journal of Antibiotics (Tokyo)	JMSCA9	Journal of Mental Science (London)
IAOCAT	Journal of the American Oil Chemist's Society, (Chicago)	JMTHBU	Journal of the Medical Association of Thailand
JAPHAR	Journal of Anatomy and Physiology (London)	JNCIAM	Journal of the National Cancer Institute (Washington, D.C.)
JAPMA8	Journal of the American Pharmaceutical Association, Scientific Edition (Washington, D.C.)	JNDRAK	Journal of New Drugs (Albany, New York)
APYAA	Journal of Applied Physiology (Bethesda, Maryland)	JNEUAY	Journal of Neuropsychiatry (Chicago)
ATAAA	Journal of the Animal Technicians Association (Nottingham, England)	JNMDAN	Journal of Nervous & Mental Diseases (Baltimore)
AVMA4	Journal of the American Veterinary Medical Association (Chicago)	JOALAS	Journal of Allergy, Including Allergy Abstracts (St. Louis)
BCHA3	Journal of Biological Chemistry (Baltimore)	JOANAY	Journal of Anatomy (London)
BJSA3	Journal of Bone and Joint Surgery (Boston)	JOBAAY	Journal of Bacteriology (Baltimore)
BMRBG	Journal of Biomedical Materials Research (New York)	JOCDAE	Journal of Chronic Diseases (New York)
		JOCEAH	Journal of Organic Chemistry (Washington, D.C.)
		JOCMA7	Journal of Occupational Medicine (Chicago)
		JOCRAM	Journal of Chromatography, International Journal of Chromatography, Electrophoresis, and Related Methods (Amsterdam)
		JOHYAY	Journal of Hygiene (London/New York)
		JONUAI	Journal of Nutrition (Philadelphia)
		JOPDAB	Journal of Pediatrics (St. Louis)

JOTPAX	Journal of Oral Therapeutics and Pharmacology (Baltimore)	MAPH**	Sollmann, T., <i>A Manual of Pharmacology</i> , 1932
JOURAA	Journal of Urology (Baltimore)	MCMM**	Tuchmann-Duplessis, H., (Ed.), <i>Malformations Congenitales des Mammiferes</i> , Paris: Masson, et cie, 1971, pp. 95-113
JPBAA7	Journal of Pathology and Bacteriology (London)	MDCHAG	<i>Medicinal Chemistry: A Series of Monographs</i> , Academic Press, New York/London
JPBEAJ	Journal de Pharmacie de Belgique (Brussels)	MDREP*	Chemical Corps Medical Division Reports (Army Chemical Center, Maryland)
JPETAB	Journal of Pharmacology and Experimental Therapeutics (Baltimore)	MDSR**	Chemical Corps Medical Division Special Report (Army Chemical Center, Maryland)
JPHAA3	Journal of the American Pharmaceutical Association (Washington, D.C.)	MDZEAK	Medizin Und Ernahrung (Munich)
JPHYA7	Journal of Physiology (London)	MELAAD	Medicina del Lavoro (Milan)
JPLD**	Journal of Pharmacy (London)	MEPAAX	Medycyna Pracy (Warsaw)
JPMRAB	Japanese Journal of Medical Sciences IV. Pharmacology (Tokyo)	MEXPAG	Medicina Experimentalis, International Journal of Experimental Medicine (Basel)
JPMSAE	Journal of Pharmaceutical Sciences (Washington, D.C.)	MGBOAJ	Magyar Tudomanyos Akademia Biologicae Orvosi Tudomanyok Osztalyamak Kozlemenyei (Budapest)
JPPGAR	Journal de Physiologie et de Pathologie General (Paris)	MGLHAE	Miheilungen Aus Dem Gebiete Der Lebensmitteluntersuchung und Hygiene (Bern)
JPPMAB	Journal of Pharmacy and Pharmacology (London)	MIMEAO	Minerva Medica (Turin)
JPTLAS	Journal of Pathology (Edinburgh, Scotland)	MJAUAJ	Medical Journal of Australia (Sydney)
JRMSAS	Journal of the Royal Microscopical Society (London)	MMAM**	<i>Mercury, Mercurials, and Mercaptans</i> , Eds. Miller, M. W., and T. W. Clarkson, C. C. Thomas, Springfield, Illinois, 1973
JRPFA4	Journal of Reproduction and Fertility (Oxford)	MMJJAI	Mic Medical Journal (Tsu, Japan)
JSCCA5	Journal of the Society of Cosmetic Chemists (London)	MMWOAU	Muenchener Medizinische Wochenschrift (Munich)
JSIRAC	Journal of Scientific and Industrial Research (New Delhi)	MMSAA9	Materialy Nauchnoi Sessii, Arkhangelsk Gosudarstvennyi Meditsinskii Institut (Arkhangelsk, Russia)
JSOOAX	Journal of the Chemical Society, C, Organic (London)	MOLAAF	Monatsschrift fuer Ohrenheilkunde und Laryngo-rhinologie (Vienna)
JTCSAQ	Journal of Thoracic and Cardiovascular Surgery (St. Louis)	MONS**	Monsanto Co. (St. Louis)
JTEHD6	Journal of Toxicology and Environmental Health (Washington, D.C.)	MPCAN*	The Morphological Precursors of Cancer
KHZDAN	Khigiena i Zdraveopazvane (Sofia)	MPHEAE	Medicina et Pharmacologia Experimentalis (Basel)
KJMDA6	Kobe Journal of the Medical Science (Kobe, Japan)	MPHEBE	Massachusetts, Dept. of Public Health Report (Boston)
KLWOAZ	Klinische Wochenschrift (Berlin)	MRCDAY	Medical Record (1866-1922) (New York)
KMBAAY	Kaiser Foundation, Medical Bulletin (Oakland, California)	MRCSAB	Medical Research Council, Special Report Series (London)
KODAK*	Eastman Kodak Company (Rochester, New York)	MRLAB3	Mededeling Rijksfaculteti
KorCJ*	Private Communication to NIOSH, from C. J. Korpics, Sherwin-Williams Chemicals, 1310 Expressway Drive, Toledo, Ohio (Huntington Research Report)	MRLR**	Landbouwwetenschappen, Gent. (Ghent, Belgium)
KREBAG	Krebsarzt (Vienna)	MTHEA8	Medical Research Laboratory Reports (Edgewood Arsenal, Maryland)
KRMJAC	Kurume Medical Journal (Kurume, Japan)	MUNKAT	Monographs on Therapy (New Brunswick, New Jersey)
KUMJAX	Kumamoto Medical Journal (Kumamoto, Japan)	MUREAV	Munkavedelem (Budapest)
LAACAR	Laboratory Animal Care (Joliet, Illinois)	MVMZA8	Mutation Research, International Journal on Mutagenesis, Chromosome Breakage, and Related Subjects (Amsterdam)
LAINAW	Laboratory Investigation (Baltimore/New York/Philadelphia)	MZUZA8	Monatshefte fuer Veterinaermedizin (Leipzig)
LAKAA3	Lakartidningen	NAHRAR	Meditinskii Zhurnal Uzbekistana (Tashkent)
LANCAO	Lancet (London)	NATUAS	Nahrung, Chemie, Physiologie, Technologie (Berlin)
LAPPAS	Lavori Dell'Istituto di Anatomia e Istologia Patologica Dell' Universita Degli Studi di Perugia (Perugia, Italy)	NATWAY	Nature (London)
LARYA8	Laryngoscope (St. Louis)	NCIAL*	Naturwissenschaften (Berlin)
LDBU**	Langer Dissertation (Breslow, 1932)	NCIBR*	Progress Report Submitted to the National Cancer Institute by Arthur D. Little, Inc.
LIFSAK	Life Sciences (Oxford/New York)		Progress Report for Contract No. NIH-NCI-E-68-1311, Submitted to the National Cancer Institute by Bio-Research Consultants, Inc., (Cambridge, Massachusetts 02141)
LIMEA*	Laboratories of Industrial Medicine, Eastman Kodak Company (Rochester, New York)		
LSPPAT	Life Sciences, Part 1, Physiology and Pharmacology (New York)		
LZAVAL	Latvijas P.S.R. Zinatnu Akademija, Vestis (Riga)		
MAIZAB	Manshy Igaku Zasshi (Dairen/Shimmeicho, South Manchuria)		

NCICP*	Progress Report Submitted to the National Cancer Institute by Charles Pfizer & Company	U.S. Clearinghouse for Scientific and Technical Information)
NCIHL*	Progress Report Submitted to the National Cancer Institute by Hazelton Laboratories, Inc.	Nauchnye Trudy. Kazanskii Medisinskii Institut
NCIIR*	Progress Report for Contract No. NO1-CP-12338, Submitted to the National Cancer Institute by IIT Research Institute (Chicago)	Nouvelles Therapeutiques (Paris)
NCILB*	Progress Report for Contract No. NIH-NCI-E-C-72-3252 Submitted to the National Cancer Institute by Litton Bionetics, Inc. (Bethesda, Maryland)	Nordisk Veterinaermedicin Danske Udgave (Copenhagen)
NCIMAV	National Cancer Institute, Monograph (Bethesda, Maryland)	New York Journal of Medicine and the Collateral Sciences (New York)
NCIMR*	Progress Report for Contract No. NIH-71-E-2144, Submitted to the National Cancer Institute by Mason Research Institute (Worcester, Massachusetts)	Folia Pharmacologica Japonica (Kyoto)
NCINS*	National Cancer Institute (Bethesda, Maryland)	Obstetrics and Gynecology (New York)
NCIPR*	National Cancer Institute Preliminary Report	Occupational Health Review (Ottawa)
NCIRI*	Progress Report Submitted to the National Cancer Institute by Piason Research Institute	Occupational Medicine (Chicago)
NCISA*	Progress Report for Contract No. PH-43-63-1132, Submitted to the National Cancer Institute by Scientific Associates, Inc. (St. Louis, Missouri 63123)	Osaka Daigaku Igaku Zasshi (Osaka)
NCISS*	Progress Report Submitted to the National Cancer Institute by South Shore Analytical and Research Laboratory	Okajimas Folia Anatomica Japonica (Tokyo)
NCITR*	National Cancer Institute Carcinogenesis Technical Report Series (Bethesda)	Occupational Health & Safety Letter, 1097
NCIUS*	Progress Report for Contract No. PH-43-64-886 Submitted to the National Cancer Institute by the Institute of Chemical Biology, University of San Francisco (San Francisco, California 94117)	National Press Building, Washington, D.C.
NCNSA6	National Academy of Sciences, National Research Council, Chemical-Biological Coordination Center, Review (Washington, D.C.)	Onol. Inforat. Buil. Prilozhenie
NCPBYY	National Clearinghouse for Poison Control Centers, Bulletin (Arlington, Virginia)	Ondersteport Journal of Veterinary Science and Animal Industry (Pretoria)
NDKIA2	Annual Report of the Research Institute of Environmental Medicine Nagoya University (Nagoya, Japan)	Olin Mathieson Chemical Data Sheet (Little Rock, Ark.)
NDRC**	National Defense Research Committee, Offices of Scientific Research and Development	Ohio Medical Journal (Ohio)
NEJMAG	New England Journal of Medicine (Boston)	Oncology (Basel)
NEOLA4	Neoplasma (Prague)	Organic Arsenical Compounds (Chemical Catalog Co., N.Y., 1923)
NEPHBW	Neuropharmacology (Oxford)	Journal of the Osaka City Medical Center (Osaka, Japan)
NEPSBV	Neuropsychopharmacology (Amsterdam)	Oyo Yakuri (Sendai, Japan)
NEURAI	Neurology (Minneapolis)	PAACAA3
NEHTIA7	Nordisk Hygienisk Tidskrift (Copenhagen)	Proceedings of the American Association of Cancer Research (Philadelphia)
NEIGZAY	Niigata Medical Journal (Tokyo)	Pathologie et Biologie (Paris)
NEHBBAZ	N.I.H. Bulletin (Bethesda, Maryland)	Pathologia et Microbiologia (Basel)
NEOSH*	National Institute for Occupational Safety and Health, U.S. Department of Health, Education, and Welfare	Patologia Polska (Warsaw)
NEIPH**	Netherlands Institute of Public Health Report No. 481 (1954), Esh, G. J. Van, Genderen	Pharmacological Reviews (Baltimore)
NEKEZA4	Japanese Journal of Public Health (Tokyo)	Pathologia Veterinaria (Basel)
NEABA2	United States Atomic Energy Commission, Nuclear Science Abstracts (Washington, D.C.)	National Cancer Institute of Canada, Canadian Cancer Research Conference, Proceedings (London/New York)
NETIS**	National Technical Information Service (Springfield, Virginia) (Formerly	Pharmaceutical Chemistry Journal (New York)
		Proceedings of the International Congress for Microbiology
		Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc. (Topeka, Kansas, 1966)
		Perugia, Div. Cancer Res., 1962
		Physicians' Desk Reference to Pharmaceutical Specialties and Biologicals, Oradell, N.J., Medical Economics, Inc.
		Pennsalt Chemicals Corporation (Philadelphia)
		Progress in Experimental Tumor Research (Basel/New York)
		Proctor and Gamble Company (Ivorydale, Ohio)
		Problemy Gematologii i Perelivaniia Krovi, (English Translation: Problems of Hematology and Blood Transfusion, New York) (Moscow)
		F. Hauschild, Pharmakologie und Grundlagen der Toxicologie, VEB Thieme (Leipzig, 1960)
		Pharmazie (Berlin)
		Psychopharmacologie (Paris)
		Pharmaceutical Journal (London)
		Pharmacologist (Washington, D.C.)
		Physiological Reviews (Baltimore/Washington)
		Public Health Reports (Washington, D.C.)
NTKMAO		U.S. Clearinghouse for Scientific and Technical Information)
NVTTHAY		Nauchnye Trudy. Kazanskii Medisinskii Institut
NVTMAF		Nouvelles Therapeutiques (Paris)
NYJMAK		Nordisk Veterinaermedicin Danske Udgave (Copenhagen)
NYKZAU		New York Journal of Medicine and the Collateral Sciences (New York)
OBGNAS		Folia Pharmacologica Japonica (Kyoto)
OCHRAI		Obstetrics and Gynecology (New York)
OCMEA4		Occupational Health Review (Ottawa)
ODIZAF		Occupational Medicine (Chicago)
OFAJAE		Osaka Daigaku Igaku Zasshi (Osaka)
OHSL**		Okajimas Folia Anatomica Japonica (Tokyo)
OIBP**		Occupational Health & Safety Letter, 1097
OJVSA4		National Press Building, Washington, D.C.
OMCDS*		20045
OMDJAA		Onol. Inforat. Buil. Prilozhenie
ONCOBS		Ondersteport Journal of Veterinary Science and Animal Industry (Pretoria)
ORARC*		Olin Mathieson Chemical Data Sheet (Little Rock, Ark.)
OSDIAF		Ohio Medical Journal (Ohio)
OYYAA2		Oncology (Basel)
PAACAA3		Organic Arsenical Compounds (Chemical Catalog Co., N.Y., 1923)
PABIAQ		Journal of the Osaka City Medical Center (Osaka, Japan)
PAMIAD		Oyo Yakuri (Sendai, Japan)
PAPOAC		PAACAA3
PAREAQ		Proceedings of the American Association of Cancer Research (Philadelphia)
PAVEAC		Pathologie et Biologie (Paris)
PCCRA4		Pathologia et Microbiologia (Basel)
PCJOAU		Patologia Polska (Warsaw)
PCMBAG		Pharmacological Reviews (Baltimore)
PCOC**		Pathologia Veterinaria (Basel)
PDCCR**		National Cancer Institute of Canada, Canadian Cancer Research Conference, Proceedings (London/New York)
PDPSBB		Pharmaceutical Chemistry Journal (New York)
PENNS*		Proceedings of the International Congress for Microbiology
PEXTAR		Pesticide Chemicals Official Compendium, Association of the American Pesticide Control Officials, Inc. (Topeka, Kansas, 1966)
PGCO**		Perugia, Div. Cancer Res., 1962
PGPKA8		Physicians' Desk Reference to Pharmaceutical Specialties and Biologicals, Oradell, N.J., Medical Economics, Inc.
PGTX**		Pennsalt Chemicals Corporation (Philadelphia)
PHARAT		Progress in Experimental Tumor Research (Basel/New York)
PHCGA6		Proctor and Gamble Company (Ivorydale, Ohio)
PHJOAV		Problemy Gematologii i Perelivaniia Krovi, (English Translation: Problems of Hematology and Blood Transfusion, New York) (Moscow)
PHMCAA		F. Hauschild, Pharmakologie und Grundlagen der Toxicologie, VEB Thieme (Leipzig, 1960)
PHREA7		Pharmazie (Berlin)
PHRPA6		Psychopharmacologie (Paris)
		Pharmaceutical Journal (London)
		Pharmacologist (Washington, D.C.)
		Physiological Reviews (Baltimore/Washington)
		Public Health Reports (Washington, D.C.)

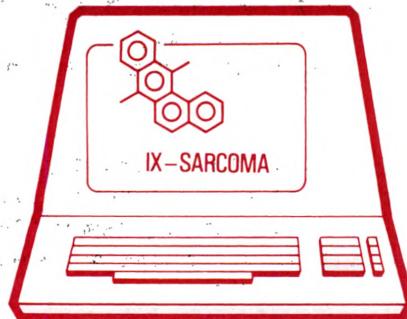
PHTXA6	Pharmacology and Toxicology (New York)	RARSAM	Radiation Research, Supplement (New York)
PHYTAJ	Phytopathology (Lancaster, Pa./Ithaca, N.Y.)	PBBIAL	Revista Bradileira de Biologia (Rio de Janeiro)
PIATA8	Proceedings of the Imperial Academy of Tokyo (Tokyo)	RCBIAS	Revue Canadienne de Biologie (Montreal)
PICCT*	Proceedings of the International Congress on Chemotherapy, 1954	RCHMA2	Revista Chilena De Higiene y Medicina Preventiva (Santiago)
PMARAU	Prensa Medica Argentina (Buenos Aires)	RCPRAN	Records of Chemical Progress (Detroit)
PMAYAH	Pharmaceutical Manufacturers' Association Yearbook (Baltimore)	RCTE Δ 4	Rubber Chemistry and Technology (Washington, D.C.)
PNASA6	Proceedings of the National Academy of Sciences of the United States of America (Washington, D.C.)	RCWI**	Eldridge, W.A., "Report 29, Chemical Warfare, In," 1929
POSCAL	Poultry Science (College Station, Texas/Ithaca, New York)	REMBA8	Revista Ecuatoriana De Medicina Y Ciencias Biologicas (Quito)
PPSOC*	Proceedings of the Pharmacology Society, Fall Meeting	REMVAY	Revue d'Elevage et de Medicine Veterinaire des Pays Tropicaux (Paris)
PQCLH*	Philadelphia Quartz Company, LaWall & Harrisson Research Laboratories, Philadelphia 3, Pa.	RFECAC	Revue Francaise d'Etudes Cliniques et Biologiques (Paris/Montreal)
PRAZAF	Praxis (Berlin)	RHMSAC	Revue d'Hygiene et de Medecine Sociale (Paris)
PREND*	Problems in Endocrinology (Russian)	RMINAC	Rassegna di Medicina Industriale (Turin)
PROJAX	Process Journal (London)	RMSRA6	Review Medicale de la Suisse Romande (Geneva)
PRLBA4	Proceedings of the Royal Society, Series B, Biological Sciences (London)	ROHMH**	Rohm and Haas Company (Philadelphia)
PRPHAS8	Produits Pharmaceutiques (Paris)	RPOBAR	Research Progress in Organic-biological and Medicinal Chemistry (Milan)
PRZHAW	Problemy Zhivotnovodstva (Moscow)	RPTXAG	Revue de Pharmacologie et de Therapeutique Experimentale (Paris)
PSCBAY	Psychopharmacology Service Center Bulletin (Bethesda, Maryland)	RPZHAW	Roczniki Panstwowego Zakladu Higieny (Warsaw)
PSDTAP	Proceedings of the European Society for the Study of Drug Toxicity (Amsterdam)	RRCRBU	Recent Results in Cancer Research (Berlin)
PSEBAA	Proceedings of the Society for Experimental Biology and Medicine (New York)	RREVAH	Residue Reviews (New York/Berlin)
PSTGAW	Proceedings of the Scientific Section of the Toilet Goods Association (New York)	RSABAC	Revista de la Sociedad Argentina de Biologia (Buenos Aires)
PSYPAG	Psychopharmacologia (Berlin)	RSPSA2	Rassegna di Studi Psichiatrici (Siena, Italy)
PTBIAN	Pathologie-biologie (Paris)	RIHMAJ	Revue de Therapeutique Medico — Chirurgicale (Paris)
PTIKP*	Promyshlennaya Toksikologiya Klinika Prof. Zabolevanii Khim. Etiol. Sb. (Moscow)	SADEAN	Saglik Dergisi (Ankara)
PTRMAD	Philosophical Transactions of the Royal Society of London, Series A, Mathematical & Physical Science (London)	SAMJAF	South African Medical Journal (Cape Town)
PTRSAV	Philosophical Transactions of the Royal Society of London (London)	SAPHAO	Skandinavisches Archiv fuer Physiologie (Leipzig)
PTUD**	Pharmacology and Toxicology of Uranium Compounds, Voegtlin & Hodge, New York, McGraw Hill, 1949	SAZTA8	Schweizerische Apotheker-Zeitung (Zurich)
PUOMAS	Proceedings of the University of Otago Medical School (Dunedin, New Zealand)	SBLEA2	Sbornik Lekarsky (Prague)
PWPSA8	Proceedings of the Western Pharmacology Society (Seattle)	SCCUR*	Shell Chemical Company, Unpublished Report (April, 1961)
QJPAAA	Quarterly Journal of Pharmacy and Allied Sciences (London)	SCHGAA*	Schadliche Gase, Flury, F., and F. Zernik; J. Springer (Berlin, 1931)
QJPPAL	Quarterly Journal of Pharmacy and Pharmacology (London)	SCHSAV	Soap and Chemical Specialties (New York)
QJSAAP	Quarterly Journal of Studies on Alcohol (New Haven/New Brunswick, New Jersey)	SCIEAS	Science (Washington, D.C.)
QJTRI*	Quarterly Journal of Tin Research Institute	SCIIR*	Science Information Report
QPMVAW	Qualitas Plantarum et Materiae Vegetabiles (Hague, Netherlands)	SCJUAD	Science Journal (London)
RADLAX	Radiology (Easton, Pennsylvania)	SCPHA4	Scientia Pharmaceutica (Vienna)
Ra1RL#	Personal Communication to Director, National Institute for Occupational Safety and Health, from Robert L. Raleigh, M.D., Assistant Director of Health and Safety Lab., Eastman Kodak Company (Rochester, New York)	SDAST*	The Soap and Detergent Association Scientific and Technical Report, The Soap and Detergent Association, 485 Madison Avenue, New York, New York 10022
RAMAAB	Revista de la Asociacion Medica Argentina (Buenos Aires)	SEIGAE	Seishin Igaku
		SEMEA8	Semana Medica (Buenos Aires)
		SGOBA9	Surgery, Gynecology, and Obstetrics (Chicago)
		SHELL*	Shell Chemical Company, Technical data Bulletin
		SINCO*	Sindar Corporation
		SKEZAP	Shokuhin Eiseigaku Zasshi (Tokyo)
		SKIZAB	Shikoku Acta Medica (Tokushima, Japan)
		SKNEA7	Annual Report of Shionogi Research Laboratory (Hyogo, Japan)
		SMSJAR	Scottish Medical and Surgical Journal (Edinburgh)
		SMWOAS	Schweizerische Medizinische Wochenschrift (Basel)

SMYT**	Smyth, Unpublished Data, Mellon Institute	TKGMB8	Trudy Khar'kovskogo Gosudarstvennogo Meditsinskogo Instituta (Kharkov, U.S.S.R.)
SOMEAU	Sovetskaia Meditsina (Moscow)	TKORAS	Trudy Kazakskogo Nauchno-issledovatel'skogo Instituta Onkologii I Radiologii (Alma-Ata)
SPCOAH	Soap, Perfumery, and Cosmetics (London)	TMMT*	Pfizer, E. A., S. O. Witherup, E. E. Larsen and K. L. Stemmer, "Toxicity of Methylcyclopentadienyl Manganese Tricarbonyl (MMT)," Kettering Laboratory, Internal Report to EPA, University of Cincinnati, 1972
SPLF**	Societe Psycho-Pharmacologie Langue Francaise	TNICS*	"The Toxicology of New Industrial Chemical Substances," Issue No. 13, Edited by the U.S.S.R. Academy of Medical Sciences, Moscow — Meditsina, 1973
SRIC**	Southern Research Institute, Birmingham, Report on the Chemotherapy of Leukemia	TNKAO*	Trudy Nauchnoi Konferentsii Aspirantov i Ordinatorov, Moscow Medical Institute (English Translation: Transactions of a Scientific Conference for Post-Graduate Students and Medical Technicians of the Moscow Medical Institute) (Moscow)
SRILR*	Stanford Research Institute, Letter Report (Menlo Park, California)	TNNPA4	Trudy, Nauchno-Issledovatelskii Institut Neftekhimicheskikh Proizvodstv. (Moscow)
SSCHAH	Soap and Sanitary Chemicals (New York)	TobJS#	Personal Communication of the Editor, Toxic Substances List from Dr. J. S. Tobin, Director, Health and Safety, FMC Corporation
STAP**	Society of Toxicology, Annual Meeting, Abstract of Papers	TOIZAG	Journal of Medical Society of Toho University (Japan)
StoGD#	Personal Communication to NIOSH from Fr. Gary D. Stoner, Department of Community Medicine, School of Medicine, University of California, San Diego, California	TPFIAP	Trudy Permskogo Farmatsuticheskogo Instituta (Perm, U.S.S.R.)
STRAAA	Strahlentherapie (Munich)	TPKVAL	Toksikologiya Novykh Promyshlennyykh Khimicheskikh Veshchestv (Moscow)
STRD**	Moore, S., and M. Gates, Summary Technical Report of Division 9, N.D.R.C., Volume 1, 1946	TPMDAB	Terapia Moderna (Milan)
STSOAN	Shornik Nauchnykh Trudov. Severo-Osetinskii Gosudars-Vennyi Meditsinskii Institut (Ordzhonikidzi, U.S.S.R.)	TRBMAV	Texas Reports on Biology and Medicine (Galveston)
SURGAZ'	Surgery (St. Louis)	TRENAF	Annual Report of Tokyo Metropolitan Laboratories for Medical Science (Tokyo)
SVSABU	Sbornik Vysoke Skoly Chemicko-Technologicke V Praze, Analytika Chemie (Prague)	TRSEAO	Transactions of the Royal Society of Edinburgh (Edinburgh)
TAKHAA	Journal of the Takeda Research Laboratories, Japan	TSKNAI	Annual Report of Gohei Tanabe Company (Osaka)
TCIA**	Transplacental Carcinogenesis, 1973, Lyon, International Agency for Research on Cancer	TUMOAB	Tumori (Milan)
TCIS**	Topics in Chemical Carcinogenesis. 2. Intern. Sympos. Princess Takamatsu Cancer Res. Fund., University of Tokyo Press, 1972	TXAPA9	Toxicology and Applied Pharmacology (New York)
TDKNAF	Annual Report, Takeda Research Laboratory (Osaka)	TXCYAC	Toxicology (Amsterdam)
TeiD††	Personal Communication from Dian Teigler, Director of Biological Research, Lee Pharmaceuticals, 1444 Santa Anita Ave., South El Monte, California	TXMDAX	Texas Medicine (Austin)
TFAAA8	Trudy Sektora Fiziologii, Akademii Nauk Azerbaidzhanskoi, S.S.R. (Baku)	UCDS**	Union Carbide Data Sheet (New York)
TFAKA4	Trudy Instituta Fiziologii, Akademiya Nauk Kazakhskoi S.S.R., (Alma Ata, U.S.S.R.)	UCPHAQ	University of California Publications in Pharmacology (Berkeley)
TGPN**	Toksikologiya Gig. Prod. Neftekhim. Neftekhim Proizvod.	UCLEAR	Urologic and Cutaneous Review (St. Louis)
THERAP	Therapie (Paris)	UICMAI	UICC Monograph Series (Berlin/New York)
THMOAM	Therapeutische Monatshefte (Berlin)	ULBRAF	Underwriter's Laboratory, Inc., Bulletin of Research (Chicago)
THORA7	Thorax (London)	UMGEA8	Uchenye Zapiski Moskovskii Nauchno-Issledovatelskii Institut Gigienny (Scientific papers) (Moscow)
THRU**	Toxic Hazards Research Unit Annual Technical Report Syste Medical Corp. NTIS	UNDRAS	Unlisted Drugs (New York/Chathan, New Jersey)
THUMAM	Therapeutische Umschau, Revue Therapeutique (Bern)	UPJOH*	Compounds Available for Fundamental Research, Volume II-6 (Antibiotics), A Program of Upjohn Company Research Laboratory
TICC**	Abstracts, Tenth International Cancer Congress, 1970 (Houston, Texas)	URAEP*	University of Rochester, Atomic Energy Project (New York), Contract W-7401-eng-49, Quarterly Technical Report
TIEUA7	Tieraerztliche Umschau (Konstanz, Germany)	URQR**	University of Rochester, Atomic Energy Project, Quarterly Report (New York); replaced URAEP*
TIVSAI	Trudy Vsesoiuznogo Nauchno-issledovatel'skogo Instituta Veterarnoi Sanitarii (Tyumen, U.S.S.R.)		
TJADAB	Teratology, A Journal of Abnormal Development (Philadelphia)		
TJEMAO	Tohoku Journal of Experimental Medicine (Tokyo)		
TJSGA8	Tijdschrift Voor Sociale Geneeskunde (Amsterdam)		

USBCC*	U.S. Borax and Chemical Company (New York)	und Verwandten Gebieten (Tubingen, Germany)	
USBP**	U.S. Bureau of Plant Industry, Soils, and Agricultural Engineering Bulletin	Zentralblatt fuer Physiologie (Leipzig/Vienna)	
VAAPB7	Virchows Archiv, Abteilung A: Pathologische Anatomie (Berlin)	Zeitschrift fuer Praeventivmedizin (Zurich)	
VAAZA2	Virchows Archiv, Abteilung B: Zellpathologie, Cell Pathology (Berlin)	Zeitschrift fuer Experimentelle Pathologie und Therapie (Berlin)	
VAKDS*	Virl. Akad. Kiado, (Speicherung, Budapest)	Journal of Nutritional Sciences (Darmstadt, Germany)	
VCTDC*	Technical Data Sheet, R. T. Vanderbilt Co. (New York)	Zeitschrift fuer die Gesamte Experimentelle Medizin (Heidelberg)	
VEAR**	Veterinarski Archiv. (Zagreb)	Zentralblatt fuer Gewerbehygiene und Unfallverhuetung (Berlin)	
VETNAL	Veterinariia (Moscow)	Zeitschrift fuer Gerichtliche Medizin (Vienna)	
VKMGA7	Voprosy Komunalnoi Gigienny (Kiev)	Zeitschrift fuer Gesundheitstechnik und Staedtehygiene (Berlin)	
VOONAW	Voprosy Onkologii (English Translation: Problems of Oncology, Amsterdam/ London/New York) (Leningrad)	Zeitschrift fur Hygiene und Infektionskrankheiten (Berlin)	
VPITAR	Voprosy Pitaniya (Moscow)	Zeitschrift fuer Die Gesamte Hygiene und Ihre Grenzgebiete (Berlin)	
VRDEA5	Vrachebnoe Delo (Kiev)	Zeitschrift fuer Immunitaetsforschung und Experimentelle Therapie (Stuttgart)	
VRRAAT	Vestnik Rentgenologii I Radiologii (Leningrad/Moscow)	Zeitschrift fur Klin Medicine (Berlin)	
WEHL**	Work-Environmental Health (Stockholm, Sweden)	Zeitschrift fuer Lebensmitteluntersuchung ung-forschung (Berlin)	
WHOTAC	World Health Organization, Technical Report Series (Geneva/New York)	Zurnal Mikrobiologii, Epidemiologii I Immunobiologii (Moscow)	
WKURAP	Wiener Kunststoff Rundschau (Vienna)	Zeitschrift fuer Morphologie und Anthropologie (Stuttgart)	
WKWOAO	Wiener Klinische Wochenschrift (Vienna)	Zentralblatt fuer die Medizinischen Wissenschaften (Berlin)	
WMWOA4	Wiener Medizinische Wochenschrift (Vienna)	Personal Communication from Dr. H. Zollner, Institut fur Biochemie, Der Universitat Graz	
WQCHM*	Water Quality Characteristics of Hazardous Materials, by W. Hann, and Paul A. Jensen, Environmental Engineering Division, Civil Engineering Department, Texas A & M University	Zjednoczenie Przemyslu Elektronicznego I Teletechnicznego, Katalog (Warsaw)	
WRPCA2	World Review of Pest Control (London)	Zeitschrift fuer Tropenmedizin und Parasitologie (Stuttgart)	
WYCCO*	Wyandotte Chemicals Corporation (Wyandotte, Michigan)	Zeitschrift fuer Unfallmedizin und Berufskrankheiten (Zurich)	
XENOBH	Xenobiotica (Guildford, England)	11FYAN	Fluorine Chemistry, (Ed.) J. H. Simons, Volume III, Biological Effects of Organic Fluorides
XEURAQ	United States Atomic Energy Commission, University of Rochester, Research and Development Report U.R. (Rochester, New York)	12NGR*	Henderson, Y., and W. Haggard, Noxious Gases, Reinhold Publication Corp., New York, 1943
XHWBAA	United States Department of Health, Education and Welfare, Office of Education, Bulletin (Washington, D.C.)	12VXA5	Stecher, P. G., M. Windholg, D. S. Leaky, D. M. Bolton and L. G. Eaton, <i>The Merck Index: An Encyclopedia of Chemicals and Drugs</i> , Merck & Co., Inc., Rahway, New Jersey, 1968
XIMMAX	United States Department of the Interior, Bureau of Mines, Monographs (Washington, D.C.)	13UZAD	Toksikologiya Redkikh Metabolov, Ikh Soedin, 1963, U.S.S.R.
XPHBAO	Public Health Bulletins, United States Public Health Service (Washington, D.C.)	13ZGA4	Gigiena i Toksikologiya Novykh Pestitsidov i Klinika Otravlenii, Doklady Vsesoyuznoi Konferentsii, Komiteata Po Izucheniiu i Reglamentatsii Indokhimikatov Glavnii Gosudarstvennoi Sanitarnoi Inspeksii S.S.R., 1962
XPHPAW	United States Department of Health, Education and Welfare, Public Health Service Publication (Washington, D.C.)	14CYAT	Patty, F. A., <i>Industrial Hygiene and Toxicology</i> , 2 Edition, New York, Interscience, 1958-1963
YJBMAU	Yale Journal of Biology and Medicine (New Haven)	14JTAF	Mycotoxins in Foodstuffs, Proceedings of the Symposium held at the Massachusetts Institute of Technology, March 18-19, 1964
YKKZAJ	Journal of the Pharmaceutical Society of Japan (Tokyo)	14KTAK	Adams, Roy M., <i>Boron, Metallo-Boron Compounds and Boranes</i> , John Wiley & Sons, New York, 1964
ZapJA#	Personal Communication to Editor Chemical & Engineering News, from Dr. J. A. Zapp, Director, Haskell Laboratory for Toxicology & Industrial Medicine, E. I. du Pont de Nemours & Co., Wilmington, Delaware 19898	15ARAS5	Voprosy Promyshlennoi i Sel'skokhozyai stvennoi Toksikologii, 1964
ZAPPAN	Zentralblatt fuer Allgemeine Pathologie und Pathologische Anatomie (Jena)	18IDAO	Finkel, A. J., C. E. Miller, J. J. Katz, Nobel — Gas Compounds, Argonne
ZEBLA3	Zeitschrift fuer Biologie (Munich)		
ZECHAU	Zentralblatt fuer Chirurgie (Leipzig)		
ZEKBAI	Zeitschrift fuer Krebsforschung (Berlin)		
ZEKIAS	Zeitschrift fuer Kinderheilkunde (Berlin)		
ZENBAX	Zeitschrift fuer Naturforschung, Ausgabe B, Chemie, Biochemie, Biophysik, Biologie		

18JKAG	National Laboratory, Lamont, Illinois, 1963	27ZTAP	<i>Clinical Toxicology of Commercial Products-Acute Poisoning</i> , 3rd Ed., Gleason, et al., Williams and Wilkins, Baltimore, 1968
19QBAV	Proceedings of the Fifth British Insecticide and Fungicide Conference, Brighton, England, November 6-9, 1961	27ZUAS	Von Oettingen, W. F., <i>The Halogenated Aliphatic, Olefinic, Cyclic Aromatic, and Aliphatic — Aromatic Hydrocarbons Including the Halogenated Insecticides</i> , Washington, D.C., USPHS Publication #414, 1955
19UQAS	Neuropsychopharmacology, Proceedings of the International Congress of the Collegium Internationale Neuropsychopharmacologicum, 5th, Washington, D.C., March 28-31, 1966	27ZWAY	Heftter's Handbuch der Experimentelle Pharmakologie
19ZPAF	Khimicheskie Paktory Vneshnei Sredy I Ikh Gigenicheskoe Znachenie, Materialy Nauchnoi Konferentsii, 2nd, Pervyi Moskovskii Meditsinskii Institut, Moscow, June 22, 1965	27ZXAA3	Dreisbach, R. H., <i>Handbook of Poisoning: Diagnosis and Treatment</i> , 4th Edition. Lange Medical Publications, Los Altos, California, 1963
20PKA3	Beryllium, Its Industrial Hygiene Aspects, 1966	27ZYA6	Handbook of Toxicity of Pesticides to Wildlife, U.S. Department of Interior (Washington)
20TRAAC	Novye Dannye Po Toksikologii Redkikh Metalov Ikh Soedinenii, 1967, U.S.S.R.	27ZZAY	Sollman, T., <i>A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology</i> , 8th Edition, Philadelphia: W. B. Saunders, 1957
20ZJAG	Nematodnye Bolezni Sel'skokhoziaistvennykh Rastenii, Itogi Vsesoiuznogo Soveshchaniia Po Fitcnematodam, 6th, Moscow, U.S.S.R., August 24-28, 1965	28ZAA9	Sollman, T., <i>A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology</i> , 7th Edition, Philadelphia: W. B. Saunders, 1942
21ACAB	Toksikologiya Novykh Khimicheskikh Veshchestv, Vnedriayemykh V Rezinovuiu I Shinnaiu Promyshlennost, 1968	28ZDAI	<i>Psychotropic Drugs</i> , Garattini, S., and V. Ghetti, Eds., Elsevier Press, Amsterdam
21TEAA	Imifos, Ed; Giller, S. A. Izd, Riga (U.S.S.R.), 1968	28ZEAL	<i>Pesticide Index</i> , (Ed.) Frear, E. H., College Science Publications, State College, Pennsylvania, 1969
23HZAR	Materialy Nauchno-prakticheskoi Konferentsii Molodyykh Gigenistov I Sanitarnykh Vrachei, 11th, Moscow, June 27-30, 1967	28ZFAO	Voegtlin and Hodge, <i>Pharmacology and Toxicology of Uranium Compounds</i> , New York: McGraw Hill, 1949
24ZIAG	Burdette, Walter J., <i>Carcinoma of the Colon and Antecedent Epithelium</i> . Charles C. Thomas Publisher, Springfield, Illinois, 1970	28ZHAU	Proceedings of the American Society for Pharmacology and Experimental Therapeutics.
26RAAN	International Council of Scientific Unions, International Upper Mantle Project, Programs and International Recommendation, 1960-63	28ZLA8	Browning, E., <i>Toxicity of Industrial Metals</i> , London: Butterworths
27ZIAQ	The Benzodiazepines, Ed: S. Garattini, S. Mussini and L. O. Randall, Raven Press, New York, 1973	28ZMAB	Eagers, R. Y., <i>Toxic Properties of Inorganic Fluorine Compounds</i> , London: Elsevier, 1969
27ZJAT	Barnes, C. D., and L. G. Eltherington, <i>Drug Dosages in Laboratory Animals — A Handbook</i> . Berkeley: University of California Press, 1965	28ZNAE	Public Health Reports, Supplement (Baltimore/Washington)
27ZKAW	Benson, W. M., and B. C. Schille, <i>Tranquilizing and Antidepressive Drugs</i> . Springfield, Illinois, C. C. Thomas, 1962	28ZOAH	Prentiss, A. M., <i>Chemicals in War</i> , 1937
27ZMA4	Clark, E. G. C. (Ed.) <i>Isolation and Identification of Drugs in Pharmaceuticals, Body Fluids and Post-Mortem Material</i> , London: The Pharmaceutical Press, 1969	28ZPAK	MUDr. Josef V. Marhold CSc., <i>Sbornik Vysledku Toxikologickeho Vysetreni Latek A Pripravku</i> , Institut Pro Vychovu Vedoucich Pracovniku Chemickeho Prumyslu Praha, 1972
27ZOAA	Gorden, M. (Ed.) <i>Psychopharmacological Agents</i> , Volume 2, New York Academic Press, 1967	28ZRAQ	Gerarde, H., <i>Toxicology and Biochemistry of Aromatic Hydrocarbons</i> , Elsevier, New York, 1960
27ZPAD	Poldinger, W., <i>Compendium of Psychopharmacology</i> . Basle: Hoffmann-La Roche, 1967	28ZSAT	DeHaen, P., <i>Drugs in Research</i> , Paul DeHaen, New York, 1964
27ZQAG	Rommen, E., S. Cohen, K. S. Ditman and J. R. Frantz, <i>Psychochemotherapy-The Physicians' Manual</i> . Los Angeles: Western Medical Publications, 1962	29ZQAU	Paterson, A. Spencer. <i>Electrical and Drug Treatments in Psychiatry</i> . New York: Elsevier Publishing Company, 1973
27ZRAJ	Usdin, E., and D.H. Efron, <i>Psychotropic Drugs and Related Compounds</i> , 2nd Edition, Washington, D.C., 1972	29ZRAX	Chen, K. K., and B. Mukerji, <i>Pharmacology of Oriental Plants</i> , Oxford: Pergamon Press, 1965
27ZSAM	Handbook of Toxicology, Volume I. Acute Toxicities, W. S. Spector, Philadelphia: W. B. Saunders Company, 1956	29ZSA2	<i>Trifluoperazines Further Clinical and Laboratory Studies</i> , Ed. by J. H. Moyer, Philadelphia: Lea and Febiger, 1959
	Abderhalden's Handbuch der Biologischen Arbeitsmethoden (F. Flurry)	29ZTAS	Wandreg, D., and V. Leutner, <i>Neuro-Psychopharmacata in Klinik und Praxis</i> . Stuttgart: F. K. Schattauer, 1965
		29ZUAS	Brown, Ethel, <i>Toxicity and Metabolism of Industrial Solvents</i> , New York: Elsevier Publishing Company, 1965
		29ZVAB	<i>Handbook of Analytical Toxicology</i> , Chemical Rubber Company, 1969
		29ZWAE	Lefaux, R., <i>Practical Toxicology of Plastics</i> , Chemical Rubber Company, Cleveland, Ohio, 1968

30ZDA9	Melnikov, N. N., <i>Chemistry of Pesticides</i> , Springer-Verlag, New York, 1971	31ZTAS	Monick, J. A., <i>Alcohols: Their Chemistry, Properties and Manufacture</i> , Reinhold Book Corporation, 1968
30ZEAC	Fishbein, Flamm, and Falk, <i>Chemical Mutagens</i> , Academic Press, 1970	32ZCAI	<i>Ganglion-Blocking and Ganglion-Stimulation Agents</i> , D. A. Kharkevich, First Moscow Medical Institute, Moscow
30ZFAF	Pattison, F.L.M., <i>Toxic Aliphatic Fluorine Compounds</i> , Elsevier, 1959	32ZDAL	K. W. Jager, <i>Aldrin Dieldrin Endrin and Telodrin: An Epidemiological and Toxicological Study of Long-Term Occupational Exposure</i> , Elsevier Publishing Company, 1970
30ZHAL	Buchanan, N. D., <i>Toxicity of Arsenic Compounds</i> , Elsevier, 1962	32ZWAA	Dreisbach, R. H., <i>Handbook of Poisoning: Diagnosis and Treatment</i> , 8th Edition, Lange Medical Publications, Los Altos, California, 1974
30ZIAO	Faulkner Hudson, T. G., <i>Vanadium Toxicology and Biological Significance</i> , New York, Elsevier Publishing Company, 1964	32ZXAD	Transactions of the Annual Meeting of the American Conference of Governmental Industrial Hygienists, 36th, Miami Beach, Florida, May 12-17, 1974
30ZMA2	Bidstrup, P.L., <i>Toxicity of Mercury and Its Compounds</i> , Elsevier, London, 1964	34ZHAD	I.F.H. Purchase, <i>Symposium on Mycotoxins in Human Health</i> , London, Macmillan, 1971
30ZQT*	Supplement to Teratology Workshop Manual from 2nd Workshop in Teratology, Berkeley, California, Jan. 25-30, 1965	34ZIAG	Deichmann, W. B., <i>Toxicology of Drugs and Chemicals</i> , Academic Press, New York, 1969
31ZLA4	Sollamn, T. H., <i>A Manual of Pharmacology</i> , W. B. Saunders Company, Philadelphia, 1942	34ZRA9	Proceedings Quadrennial Conference on Cancer, Perugia, Italy, University of Perugia (1966), L. Severi (Ed.)
31ZNAA	<i>Critical Reviews of Toxicology</i> , R. D. Kimbrough, CRC Press, 1974		
31ZOAD	<i>Pesticide Manual</i> , 3rd Edition, British Crop Protection Council, Worcestershire, England, 1972		
31ZPAG	<i>Synthetic Analgesics</i> , Pergamon Press, 1966		



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TDB
TOXICOLOGY DATA BANK

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The Toxicology Data Bank (TDB) is an online, interactive file containing chemical, pharmacological, and toxicological data extracted from textbooks, handbooks, criteria documents, and monographs. The file is prepared at the National Library of Medicine (NLM) and made available through its online service, the Medical Literature Analysis and Retrieval System (MEDLARS). TDB contains data and information on about 2,500 substances, plus notices that more than 750 additional substances are in the process of data extraction. Thus, over 3000 substances are in the public TDB file. Data in TDB have been reviewed by a peer group of scientists.

Information in TDB is organized around each chemical substance with records composed of approximately 60 different data elements. The elements are grouped into eight categories which include chemical, physical, biological, pharmacological, toxicological, and environmental information.

These are listed below with a brief description of each.

DESCRIPTIVE PROFILE

contains chemical identification information such as TDB numbers, CAS Registry Numbers, chemical names, molecular formulas, and Wiswesser line notation.

EXCERPT TERMS

contains human and animal/non-human toxicity excerpts, interaction excerpts, and laboratory method excerpts

INDEX STRINGS

generated by indexing the corresponding excerpts in the Excerpt category using TOXMeSH vocabulary or chemical names and CAS Registry Numbers.

VALUES

contains various toxicity values (LC50, LCLO, LD50, LDLO, MLDO, TDLO, TCLO, and TLM), minimum fatal doses, maximum daily intakes, threshold limit values, and maximum daily doses

PHARMACOLOGY/TOXICOLOGY

contains information on absorption, distribution, excretion, metabolism, poisoning potential, antidote and treatment, pharmacotherapy, therapeutic uses, warnings and cautions, idiosyncrasies, therapeutic indices, tolerances and resistances, and mechanisms of action

ENVIRONMENTAL INFORMATION

contains information on environmental and occupational exposure and limits, pollution potentials, fire potentials, explosive limits, radiation limits and potentials, shipment methods, and disposal methods for toxic compounds

MANUFACTURING DATA

contains various types of manufacturing information including major uses, methods of manufacturing, manufacturers, consumption patterns and US production, import, and export information

CHEMICAL-PHYSICAL PROPERTIES

contains information on the following chemical-physical properties: boiling, melting, and flash points, color and form, density, vapor pressure, solubility, stability and shelf life, spectral properties, and molecular weight

ESSED

TDB is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via nationwide networks using telephone lines and small computers with access nodes located in many major cities.

CHED

TDB is primarily searched using free text terms. The human and animal/non-human toxicity excerpts have been indexed with TOXMeSH vocabulary. The user can search TDB for a particular chemical record by entering the TDB number, CAS Registry Number, or a chemical name. The user can also search TDB for information on a group of compounds, or to identify a group of substances on the basis of a selected effect or criteria, or to focus on selected information reported for a given substance.

ABILITY

TDB is available at NLM Monday, Wednesday, and Thursday from 3:00 a.m. to 8:00 p.m., and Tuesday and Friday 3:00 a.m. to 9:00 p.m. and Saturday from 8:30 a.m. to 9:00 p.m. (Eastern Time)

IT

The cost of access to the TDB file is \$22 per hour during prime time (10:00 a.m. to 5:00 p.m.), and \$11 per hour at non-prime times. There is a charge of \$0.15 per page for offline printout. (effective October 1, 1981)

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National Library of Medicine
8600 Rockville Pike
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Telephone: (301) 496-6193

For TDB content including search strategies contact:

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10/1/81

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September 1978

TOXICOLOGY DATA BANK (TDB)

What is the Toxicology Data Bank (TDB)?

The Toxicology Data Bank (TDB) is an on-line, interactive file of chemical, pharmacological/toxicological information and data, extracted from some 80 major textbooks and handbooks. The data have been reviewed by a peer review group of scientists, knowledgeable in the subject matter.

The file contains data and information on 1100 substances, plus information on some additional 1500 which are in the process of data extraction. Thus, approximately 2600 substances are in the first, public TDB file.

What data elements are in the TDB?

The TDB contains over 60 different data elements, such as:

- Synonyms
- Chemical & Physical Properties
- Molecular Formula
- Chemical Abstracts Service Registry Number
- Human Toxicity
- Animal Toxicity
- Laboratory Methods
- Interactions
- Threshold Limit Values
- Absorption, Distribution, Excretion
- Metabolism
- Antidote & Treatment
- Mechanism of Action
- Environmental Information
- Manufacturing Information

How is TDB accessed?

TDB can be accessed by a variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via a nationwide network using telephone lines and small computers with access nodes located in many major cities.

How is TDB searched?

TDB will be searched primarily using free text terms (natural language), like TOXLINE. Human and animal toxicity excerpts have been indexed with MeSH (Medical Subject Headings).

Records may be printed on-line at the user's terminal, or off-line and mailed to the user from NLM. Users may select their own print format, use standard print commands already formatted, or print the entire record on a substance by entering "PRT DL COMPLETE.

When will TDB be available?

The Toxicology Data Bank is currently scheduled to be publicly available to domestic on-line NLM users on October 30, 1978.

TDB will be available during normal NLM operating hours.

How much does TDB cost?

TDB will be available at normal NLM rates, once charging for the service is initiated. This is anticipated January 1, 1979.

How does one subscribe to TDB?

Institutions wishing to become TDB subscribers must sign agreements with the National Library of Medicine and with its billing agent, the National Technical Information Service. Subscribing institutions must agree to send one professional staff member for training.

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National Library of Medicine, Room C-6B
8600 Rockville Pike
Bethesda, Maryland 20014

Telephone: (301) 496-1131

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TOXICOLOGY DATA BANK (TDB)

SEARCH MANUAL

FOR FILE

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PUBLICLY AVAILABLE

TO

NLM ON-LINE U.S. USERS

ON

OCTOBER 30, 1978

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PART 15

TOXICOLOGY DATA BANK (TDB)

15.1 INTRODUCTION

The Toxicology Data Bank (TDB) is an on-line, interactive file which contains facts and data from some 80 standard reference textbooks, handbooks, monographs and criteria documents, for approximately 2500 substances; 1100 of these have been completed; 1500 are in process. The TDB has information organized around a chemical substance, like RTECS. The TDB contains approximately 60 different categories of data, such as chemical, physical, biological, pharmacological, toxicological, environmental facts. Specific data elements include Chemical Abstracts Service Registry Number, synonyms, molecular formula and weight, human and animal toxicity, antidote and treatment, etc.

The data have been reviewed by a peer review group of scientists, from NIH's Study Section in Toxicology, which is comprised of pharmacologists, toxicologists, chemists, etc.

The TDB is searchable primarily using free text terms like TOXLINE, prequalifying the terms with the desired search groupings. Only four fields have been indexed with Medical Subject Headings, MeSH vocabulary. These four fields are human toxicity excerpts, animal toxicity excerpts, interactions excerpts, and laboratory methods excerpts

MeSH main headings are used, not subheadings or qualifiers.

Users are encouraged to "NEIGHBOR" a term to see which field(s) the term is in the file. Do not use ALL TERM: without prequalifying, as the user will not know which of the 60 categories the term is in. To obtain the entire record on a substance, enter "PRT DL COMPLETE. Users are encouraged to try "PRT DL COMPLETE INDENTED with initial searches.

The National Library of Medicine and staff assume no responsibility or liability for the inclusion or exclusion of information/data in the file and associated materials.

The file is scheduled to become available to the public on October 30, 1978, to U.S. on-line centers. During the months of November and December, 1978, on-line access will be free. NLM standard rates will begin January 1, 1979.

15.2 GENERAL ASSISTANCE TELEPHONE NUMBERS

The telephone number for questions on system and communication problems, program interpretation, etc. is (800) 638-8480 or (301) 496-6193, MEDLARS Management Section. The telephone number for technical assistance in search strategy, etc., is (301) 496-1131, the Toxicology Information Program.

* In NEIGHBORing a term, one may notice the concatenation of certain words in the existing TDB file. This is a systems problem which will be subsequently corrected.

15.3 ENTERING THE TOXICOLOGY DATA BANK (TDB) FILE

U.S. on-line subscribers may access the TOXICOLOGY DATA BANK file by following NLM login procedures. To switch to the TOXICOLOGY DATA BANK, users may enter either "FILE TDB or "FILE TOXICOLOGY DATA BANK.

15.4 TDB UNIT RECORD

The unit record in TDB consists of approximately sixty (60) data elements. Each element is identifiable to ELHILL by a two, three or four character mnemonic, as listed in the unit record description. Some elements have the potential of being both directly searchable and printable. Other elements are printable, but not directly searchable.

Some elements have been grouped together for searching and also printing purposes. Note that with ELHILL, if items are grouped, there must be different search and PRINT abbreviations.

N.B.: Note the differences in abbreviations for search/PRINT for: excerpts, index strings, values, pharmacology/toxicology, environmental information, manufacturing data, in the table below.

As a general rule, where the information has been grouped for search purposes, the PRINT abbreviations are the first 2-3 characters of the search mnemonic plus the letter "S",

i.e., search	<u>PRINT</u>
(IX)	IXS
(EX)	EXS
(VALU)	VALS
(PHTX)	PHTS
(ENVR)	ENVS
(MANF)	MANS

To assist the user in remembering PRINT groupings, these have also been given names (up to 8 characters), i.e., STANDARD; EXCERPTS; INDEXSTR; VALUE; PHARMTOX; ENVIRON; MANUFACT; PHYSPROP; DETAILED; see table below.

To obtain the entire record on a chemical, one "NEIGHBOR's the agent, selects it as an (SY) synonym or finds it as a (RN) CAS Registry Number, then enters:

"PRT DL COMPLETE

Users are encouraged to try "PRT DL COMPLETE INDENTED with initial TDB searches to become familiar with the data elements.

Users can also enter "EXPLAIN TDB to obtain a brief description on-line of the unit record.

TOXICOLOGY DATA BANK UNIT RECORD DESCRIPTION

The print options should be read down the column, i.e., STANDARD, EXCERPTS, STR, VALUE, PHARMTOX, ENVIRON, MANUFACT, PHYSPROP, DETAILED.

PRINT OPTIONS

S	E	I	P	M	P	D
T	X	N	H	E	A	E
A	C	D	A	N	Y	T
N	E	E	V	R	V	U
D	R	X	A	M	I	F
A	P	S	L	T	R	A
R	T	T	U	O	O	C
D	S	R	E	X	N	P

Elements	Search Abbrev.	Elements Included	PRINT Abbrev.									
Data Bank Number Registry Number Synonyms Fragments Molecular Formula Mol. Fragments User Line Notation Name of Substance	(TDBN) (RN) (SY) (NF) (MF) (FF) (WL) (SY)	TDB Number CAS Registry Number Synonyms Name Fragments Molecular Formula Mol. Formula Frag. Wiswesser Line Notation Name of Substance	TDBN RN SY MF WL NM	X								X
Text Terms*	(EX)		EXS									
		Animal Toxicity Excerpt Human Toxicity Excerpt Interaction Excerpt Laboratory Methods Excerpt	ATEX HTEX INEX LMEX									X
Strings*	(IX)		IXS									
		Animal Toxicity Keywords Human Toxicity Keywords Interactants, CAS Nos. Laboratory Methods Keywords	ATKW HTKW INCN LMKW									X
	(VALU)		VALS									X
		Toxicity Values Minimum Fatal Dose Maximum Daily Intake Threshold Limit Value Max. Daily Dose, Fatal Dose	TOXV MINF MXDI TLIM MAXF		X	X	X	X	X	X	X	

: "PRT EXS, "PRT IXS will print only the hit excerpts, index strings when searched. Just add COMPLETE to see all excerpts, or index strings; or PRINT desired fields

Search Elements	Search Abbrev.	Elements Included	PRINT Abbrev.	S E I P	T X N H E	A C D A N	N E E V R V	D R X A M I	A P S L T R	R T T U O O	D S R E X N
Pharmacology/Toxicology	(PHTX)	Absorption, Distribution, Excretion Metabolism Poisoning Potential Antidote & Treatment Pharmacotherapy Therapeutic Uses Warnings/Cautions Idiosyncracies Therapeutic Index Tolerance & Resistance Mechanism of Action	PHTS							X	
Environmental Info.	(ENVR)	Environ/Occup. Exp. & Limits Pollution Potential Fire Potential Explosive Limits Radiation Limits & Pot. Shipment Methods Disposal Methods	ENVS							X	
Manufacturing Data	(MANF)	Classification by Major Use Major Uses Most Probable Method of Manuf. (U.S.) Manufacturing Info. Manufacturers Consumption Pattern U.S. Production U.S. Imports U.S. Exports	MANS							X	

PRINT OPTIONS

S	E	I	P	M	P	D
T	X	N	H	E	A	H
A	C	D	A	N	N	Y
N	E	E	V	R	V	U
D	R	X	A	M	I	F
A	P	S	L	T	R	A

Search Elements	Search Abbrev.	Elements Included	PRINT Abbrev.	PP															
Chemical-Physical Properties																			
	Not Directly Searchable	Boiling Point Color/Form Density/Spec. Gravity Flash Point Melting Point Molecular Weight Solubility Spectral & Other Prop. Stability/Shelf Life Vapor Pressure	BP CF Den FP MP MW SOL SP SL VAP	PP												X	X		
Status (Not searchable)		Status	ST	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

te: "PRT EXS, "PRT IXS will print only the hit excerpts, index strings when searched. must add COMPLETE to see all excerpts, or index strings; or PRINT desired fields separately, i.e., "PRT NM, ATEX COMPLETE.

15.5 TOXICOLOGY DATA BANK NUMBER (TDBN)

This is a 4 digit number, unique for each record. It is directly searchable; leading zeros must be entered. This field is not rangeable.

15.6 CHEMICAL ABSTRACTS SERVICE (CAS) REGISTRY NUMBER (RN)

This is a unique number to identify a chemical substance, e.g. 143-50-0. It is directly searchable. It must contain hyphens; leading zeros must be removed. Therefore, 000143500 would be searched as: 143-50-0 to obtain the primary record for the chemical Kepone. This is consistent with searching CHEMLINE, RTECS, and TOXLINE. (Note: Later in the interactant field there are CAS Registry Numbers for specific interactants. The format for CAS numbers in this field is the full 9 digits, searchable using (IX). This is to distinguish a master record on a chemical from interactants. Therefore, Kepone as an interactant would be searched 0000143500 (IX), see Interactants, CAS Registry Numbers (INCN)).

15.7 SYNONYMS (SY)

These are chemical names, trade names, generic names, and synonyms found in the sources reviewed. Therefore, there are variations with the synonyms in this field and those found in CHEMLINE. The first 36 characters of these names are directly searchable, including hyphens, parentheses, numbers, etc. One can "NEIGHBOR the name of the chemical, i.e., "NBR LINDANE, "NBR KEPONE.

Where one finds a substance as an (SY), this means a TDB record has been built by extracting information/data on the substance. Where a chemical may have other mnemonics, e.g., Phosgene (PHTX), this means information/data on phosgene is in 1 or more fields in the Pharmacology/Toxicology field(s) of other records.

15.8 NAME OF SUBSTANCE (NM)

This is one name from the synonym list selected to PRINT with all the standard PRINT commands, to associate the information/data with the chemical. This name is usually the more common name of the chemical, as opposed to the 9th Collective Index (9CI) name of the chemical used by Chemical Abstracts Service. This name is also searched when one searches the Synonym (SY) field. It does not print in the list of synonyms, however. Note: The NM is a PRINT mnemonic, not a search mnemonic. If users wish to PRINT separate fields, always "PRT NM, to associate the name of the substance with the data/information.

NAME FRAGMENTS (NF)

meaningful parts of common and chemical names, including parent, constituents, modifiers and locants are individually or collectively searchable as name fragments. Name fragments are derived from the synonym (SY) field and the name (NM) field by breaking a name on hyphens, commas, enclosures (e.g. parentheses, brackets, etc.) and blanks. Therefore, the synonym

1,1-DIMETHYL HYDRAZINE

could be searched using name fragments as follows:

(NF) 1,1 AND DIMETHYL AND HYDRAZINE

could also be searched directly, as 1,1-DIMETHYL HYDRAZINE. It must be entered exactly as shown, therefore, it is preferable to "NEIGHBOR" the name of a substance to determine how it might be entered in the TDB.

10 MOLECULAR FORMULA (MF)

Molecular Formula represents the elemental composition of a chemical substance in terms of the number and kinds of atoms contained in its structure. The Molecular Formula in TDB is expressed in the same format as in CHEMLINE, the Hill convention, as expressed below:

- a. For organic (carbon-containing) compounds, the number of carbon atoms is given first, followed by the number of hydrogen atoms, if present, then the remaining elemental symbols in alphabetical order. The Molecular Formula for 1,1-DIMETHYL HYDRAZINE is:

(MF) C2-H8-N2

- b. For inorganic (non-carbon containing) compounds, the elemental symbols are given strictly in alphabetical order. The molecular formula field for silicon tetrafluoride is:

(MF) F4-SI

Molecular Formula field also incorporates the "dot-disconnect" convention used by Chemical Abstracts Service. For salts, mixtures and molecular addition compounds, the molecular formulas of the components are presented individually, and are separated with a "dot" or period.

11 MOLECULAR FORMULA FRAGMENTS (FF)

Individual chemical elements of the Molecular Formula (MF) field, with the exception of hydrogen, are directly searchable through the use of the Formula Fragment (FF) abbreviation. Formula Fragments are generated from the molecular formula field by breaking on hyphens and "dots" and saving the individual atoms (excluding hydrogen) with their numerical counts.

For the hetero atoms (nitrogen, oxygen, phosphorus, and sulfur), and the halogens (fluorine, chlorine, bromine, and iodine), a special generic formula fragment is created for the element in addition to a formula fragment for the element with its actual count. This feature permits the user to search generically for the presence of any (unspecified) number of hetero or halogen atoms in a chemical compound, or for a specific number of these, i.e., S vs S2. The first example S, would retrieve any number of "sulfur" atoms. S2 would retrieve only those with two sulfur atoms. The example of silicon tetrafluoride would be searched using formula fragments as:

(FF) F4 and S11

15.12 WISWESSER LINE NOTATION (WL)

The Wiswesser Line Notation (WLN) is a unique and unambiguous representation of a chemical structure in a single character string using a standardized arrangement of 40 symbols (numerics, alphabetics, three special characters and blanks). Not all records in the TDB have this field. This field is searchable directly, up to the first 36 characters:

e.g. (WL) T6NJ:

15.13 EXCERPTS

The next four categories (animal toxicity, human toxicity, interactions, laboratory methods) have free text excerpts which are searchable as uniterms, using the abbreviation (EX). When one enters "PRT EXS, (or "PRT EXCERPTS) only the hit excerpt is printed, along with the name of the substance. One can view all 4 categories by entering "PRT EXS COMPLETE, or each category separately, with the word COMPLETE, e.g. "PRT NM, ATEX COMPLETE. (To PRINT the substance name and the animal toxicity excerpts completely, see below.)

15.13.1 ANIMAL TOXICITY EXCERPTS (ATEX)

These are free text words describing animal toxicity, taken from the sources used. The text words are extracted into uniterms, using the same rules as for TOXLINE. Each excerpt is less than 300 characters. Each excerpt also has the source of information associated with the material. There may be a number of animal toxicity excerpts for a chemical. When one searches using (EX), and then enters a "PRINT EXS command, only the "hit" excerpt will be printed. If one wishes to view all animal toxicity excerpts for a chemical one must enter "PRINT NM, ATEX COMPLETE. Note the word COMPLETE must be added to view all in this field. The animal toxicity excerpts are indexed using MeSH (Medical Subject Headings) vocabulary, searchable using (IX), printing as animal toxicity keywords (ATKW), see later in this manual.

Note: To obtain actual animal toxicity data (LD50 values, etc.), users should also consider printing the Toxicity Values field (TOXV), see later in this manual.

15.13.2 HUMAN TOXICITY EXCERPTS (HTEX)

These are free text words describing human toxicity, taken from the sources used. These free text words are extracted into uniterms, using the same rules as for TOXLINE. Each excerpt also has the source of information associated with the material. Each excerpt is less than 300 characters. There may be a number of human toxicity excerpts for a chemical. When one searches using (EX), and then enters a "PRINT EXS" command, only the "hit" excerpt will be printed. To view all human toxicity excerpts for a chemical one must enter: "PRINT NM, HTEX COMPLETE. Note the word COMPLETE must be used, to view all human toxicity excerpts. The human toxicity excerpts have also been indexed with MeSH vocabulary (main headings, not subheadings or qualifiers) searchable using (IX), printing as human toxicity keywords (HTKW), see later in this manual. Note: For additional information on human toxicity, users should also consider several other fields, such as minimum fatal dose (MINF); maximum daily intake (MXDI); threshold limit value (TLIM); maximum daily dose, fatal dose (MAXF); poisoning potential (PPOT), etc., all described later in this manual.

15.13.3 INTERACTION EXCERPTS (INEX)

These are free text words describing any interaction with other chemicals, or interference with laboratory tests. Excerpts are less than 300 characters in length. When one searches using (EX), and then enters "PRINT EXS, only the "hit" excerpt will be retrieved. To view all interaction excerpts one must enter "PRINT NM, INEX COMPLETE.

Where specific chemicals have been named as interacting, these are also listed in the interaction Keyword field, (INCN), described later.

15.13.4 LABORATORY METHODS EXCERPTS (LMEX)

These are free text excerpts which describe methods to detect, determine, analyze the chemical in general samples, air, tissues, etc.

When one searches using (EX), the "PRINT EXS will print only the "hit" excerpts. To view all laboratory method excerpts "PRINT NM, LMEX COMPLETE should be used.

The free text excerpts are also indexed in a standardized format including the type of sample (air, blood, tissues, urine, etc.) and type of method (chromatography, gas; spectrophotometry; colorimetry; titration, etc.) See further explanation of LMKW (laboratory methods keywords) later in this manual.

15.14 INDEX STRINGS

The next four categories consist of index strings assigned to each of the four kinds of excerpts (human, animal, interactions, lab methods). Only these four categories have been indexed in TDB. One searches using the abbreviation (IX), one PRINTS using "PRT IXS which prints only the hit index string (keywords) associated with the hit excerpt. One can also enter "PRT INDEXSTR. One can enter "PRT IXS COMPLETE to view all index strings (keywords), for all 4 fields, or the individual fields, i.e., "PRT NM, ATKW COMPLETE to obtain the name of the substance, plus the animal toxicity keywords (ATKW) see below.

15.14.1 ANIMAL TOXICITY KEYWORDS (ATKW)

The animal toxicity excerpts (searched as (EX) using free text terms) have been indexed with the MeSH (Medical Subject Headings) vocabulary main headings. The following items are indexed and linked, so as to prevent false drops on retrieval.

Study type; Species, Strain; Route of Administration; Site, Test, Effect(s)
Where no data are available in the excerpt, ND is entered and is printed.

A sample animal toxicity excerpt (ATEX) and associated animal toxicity index information (ATKW) (animal toxicity keywords) is shown in the appendix.

NOTE: (1) The species are entered as plural forms in the index string field (IX) and must be searched as such, i.e.

(IX) RATS

(2) The MeSH vocabulary terms are searchable as multiword terms. In addition to MeSH, (e.g. PERIPHERAL NERVE DISEASES, KIDNEY D there are also 26 terms which can be used to search the site, systems, physiological phenomena, (i.e., Carcinogenesis), see attachment. One enters the mnemonic (IX) for Index String file. One cannot explode MeSH terms or MeSH tree numbers. The terms, phrases must be entered instead.

15.14.2 HUMAN TOXICITY KEYWORDS (HTKW)

The human toxicity excerpts (HTEX), searched as (EX) have been indexed with MeSH vocabulary. The following items are indexed and linked to prevent false drops on retrieval:

Study type; Race; Age; Sex; Route of Administration; Site; Test; Effect(s)

To view all human toxicity index strings, on a particular substance, one enters "PRT NM, HTKW COMPLETE.

15.14.3 INTERACTANTS: CAS REGISTRY NUMBERS (INCN)

The interaction excerpts (INEX) have the chemical, or chemical class, and sometimes the CAS Registry Number for the interacting chemical. Note that the CAS Registry Number is 9 digits, with leading zeros, without hyphens and is searchable using (IX). This is to distinguish interactants from the master record on a chemical.

15.14.4 LABORATORY METHODS KEYWORDS (LMKW)

The laboratory methods excerpts (LMEX) have been indexed as to the substrate, and determinative procedure.

15.15 TOXICITY VALUES

The next five fields contain values and are searchable using uniterms with the abbreviation (VALU). All values may be printed using "PRT VALS. "PRINT VALUE also prints all 5 fields plus the name of the substance. Individual fields may be directly printed specifying the name of the field along with the substance, e.g., PRT NM, TOXV (to obtain the name of the substance plus non-human toxicity data).

15.15.1 TOXICITY VALUES (TOXV)

These values are for animal toxicity studies, including:

LC50 = Lethal Concentration (50% kill) in air

LCLo = lowest published lethal concentration other than LC50, in air

LD50 = lethal dose (50% kill) any route except inhalation

LDLo = lowest published lethal dose, other than LD50,
any route except inhalation;

Mean Lethal Dose

MLD = Minimum Lethal Dose

TCLo = Lowest published toxic concentration, in air

TDLo = Lowest published toxic dose, any route other than inhalation

Data is entered in the following format:

Data Name	Species (Plural)	Route of Administration	Value
-----------	------------------	-------------------------	-------

If a study indicates a lethal concentration, in a particular species and gives a value, this is directly entered as shown.

Any particular experimental conditions, or noted effects, i.e. carcinogenesis, are entered after the data.

If the data does not indicate a specific effect, but contains a statement such as: "no adverse effects were observed", then the EFFECTS field will be indexed "NO EFFECTS".

If direct statements about the level of toxicity of the compound are made these are indexed as:

TOXICITY/NONE
TOXICITY/LOW
TOXICITY/HIGH
TOXICITY/MODERATE

15.15.2 MINIMUM FATAL DOSE (MINF)

This is free text information containing the amount reported to be lethal in humans.

15.15.3 MAXIMUM DAILY INTAKE (MXDI)

This is free text information on maximum acceptable daily intake levels, should not normally be exceeded in humans.

15.15.4 THRESHOLD LIMIT VALUE (TLIM)

This threshold limit value (TLV) is the concentration or amount in the air, usually extracted from the American Conference of Governmental Industrial Hygienists, in a standardized format. Threshold Limit Values refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be...exposed day after day without adverse effects.

15.15.5 MAXIMUM DAILY DOSE, FATAL DOSE (MAXF)

This is free text information on values reported as recommended daily doses for humans which should not be exceeded or amounts that have caused fatalities.

15.16 PHARMACOLOGY/TOXICOLOGY

The next 11 categories of information have been extracted, as uniterms and are searchable using the abbreviation (PHTX); the individual fields have their own PRINT ABBREVIATIONS. In addition, all elements in these categories may be viewed by entering "PRINT PHTS. "PRINT PHARMTOX also prints all 11 categories plus the name of the substance.

15.16.1 ABSORPTION, DISTRIBUTION, EXCRETION (ADE)

This free text information contains the route(s) and rate(s) of absorption, distribution, and excretion of the substances.

15.16.2 METABOLISM (METB)

This field contains information on the species, route of exposure of the chemical, any changes the chemical undergoes in vivo, any metabolites, if known. These are searchable using free text.

15.16.3 POISONING POTENTIAL (PPOT)

This field contains information in the toxic hazard ratings for humans as listed in sources such as Sax Dangerous Properties of Industrial Materials, IARC Monographs, Clinical Toxicology of Commercial Products. It also lists some effects which may occur after toxic exposures.

15.16.4 ANTIDOTE & TREATMENT (ANTR)

This free text field contains descriptions of procedures and agents to be used to treat acute and chronic exposure to the agent.

15.16.5 PHARMACOTHERAPY (PHTH)

This field contains information on pharmacology, therapy, etc.

15.16.6 THERAPEUTIC USE & INDICATIONS (THER)

This free text field describes the various therapeutic uses of the drug, including some dosage information.

15.16.7 WARNINGS, CAUTIONS (WARN)

This free text field contains various warnings associated with the administration of therapeutic agents.

15.16.8 IDIOSYNCRACIES (IDIO)

This field contains various unexpected reactions associated with administration of therapeutic agents.

15.16.9 THERAPEUTIC INDEX (INDX)

This free text field contains information on the amount of the agent needed for treatment of an effect in relation to the amount causing toxic reactions.

15.16.10 TOLERANCE AND RESISTANCE (TOLR)

This field contains information as to whether tolerance develops to the agent, i.e., the same amount of the agent produces less effects with the passage of time and successive doses. It also states whether resistance develops, and specifies the organisms found to be resistant, especially with antibiotics.

15.16.11 MECHANISM OF ACTION OF ACTIVE INGREDIENT (ACTN)

This free text field describes the mechanism of action of the active ingredient, when found in the sources checked.

15.17 ENVIRONMENTAL INFORMATION

The next seven fields contain environmental information, and may be searched collectively, as uniterms, using the search abbreviation (ENVR). One may elect to print all environmental information, and would enter "PRT ENVS. "PRT ENVIRON also prints all seven fields, plus the name of the substance. One could selectively print individual fields, i.e., "PRT NM, POLP to obtain the name of the substance and the pollution potential.

15.17.1 ENVIRONMENTAL AND OCCUPATIONAL EXPOSURE AND LIMITS (EVLM)

This field contains free text information on the potential environmental and occupational hazards of the chemical, including some protective measures one should use. It also contains environmental limits for humans and occupational limits which should not be exceeded.

15.17.2 POLLUTION POTENTIAL (POLP)

This free text information describes the potential human hazards of the agent in the environment. It also contains information regarding the accumulation, persistance and degradation of agents in the environment.

15.17.3 FIRE POTENTIAL (FPOT)

This free text field describes the potential of the agent as being a fire hazard. It may also contain information on necessary storage conditions of the agent.

15.17.4 EXPLOSIVE LIMITS (EXPL)

This field describes the explosive potential of the agent.

15.17.5 RADIATION LIMITS (RADL)

This field contains information on radiation limits and potential.

15.17.6 SHIPMENT METHODS (SHIP)

This field describes those shipping regulations/requirements found in the sources checked. It also describes necessary labeling associated with shipment of the agent. Storage and handling requirements may also be discussed.

15.17.7 DISPOSAL METHODS (DISP)

This free text field describes cautions for disposal of the agent, where found.

15.18 MANUFACTURING DATA

The next nine fields contain information on manufacturing data. Five of these fields are directly searchable, as uniterms, using the search abbreviation of (MANF). One could print all manufacturing data by entering "PRT MANS. "PRT MANUFACT also prints all fields in this group. One can print selected fields, e.g., "PRT NM, USE to obtain the name of the substance and its uses.

15.18.1 CLASSIFICATION BY MAJOR USE (CMU)

This information describes the major use of the agent.

15.18.2 MAJOR USES (USE)

This field lists the various uses found in the sources checked.

15.18.3 MOST PROBABLE METHOD OF MANUFACTURE IN U.S. (MMA)

This field describes the most probable method used in the U.S. to manufacture the agent.

15.18.4 MANUFACTURING INFORMATION (MMI)

This field contains information on manufacture in other countries, residue levels on various crops, etc.

15.18.5 MANUFACTURERS (MFS)

This field contains the name and addresses of manufacturers supplied by SRI (Stanford Research Institute). Some manufacturers' names are also found in the manufacturing information (MMI) field.

15.18.6 CONSUMPTION PATTERN (CPAT)

This information, where available, is obtained from Stanford Research Institute (SRI), Chemical-Environmental Program. This field contains information and data regarding what the agent is used for, and how much is used in various applications, e.g., 100% MEDICINAL.

15.18.7 U.S. PRODUCTION (USP)

This data is obtained from SRI, where available. Production figures are listed as amounts, or as ND where no data was available.

15.18.8 U.S. IMPORTS (IMPT)

This information is also obtained from SRI, where available. It is presented in the same format as Consumption Pattern and Production data.

15.18.9 U.S. EXPORTS (EXPT)

This information is also obtained from SRI, where available. It is in the same format as import data.

15.19 CHEMICAL-PHYSICAL PROPERTIES

The next ten fields of Chemical-Physical Properties are not directly searchable. One can print all information by entering "PRT PP. "PRT PHYSPROP also prints all 10 fields plus the name of the substance. One selectively prints individual fields, e.g., "PRT NM, BP, CF, MW. This prints the name, boiling point, color/form, and molecular weight.

15.19.1 BOILING POINT (BP)

This is the boiling point value or range at standard temperature and pressure, unless otherwise specified.

15.19.2 COLOR/FORM (CF)

This is the physical state and appearance of the substance, including shape of crystals, whether liquid, gas, dust, etc.

15.19.3 DENSITY/SPECIFIC GRAVITY (DEN)

This is the density or specific gravity of the substance.

15.19.4 FLASH POINT (FP)

This is the temperature recorded as the flash point, either by the open cup (OC) method, or the closed cup (CC) method.

15.19.5 MELTING POINT (MP)

This is the melting point value or range of the substance.

15.19.6 MOLECULAR WEIGHT (MW)

This is the molecular weight of the agent.

15.19.7 SOLUBILITY (SOL)

This field describes the nature of the solubility/insolubility of agent in various solvents.

15.19.8 SPECTRAL AND OTHER PROPERTIES (SP)

This field includes spectral values, acid reaction requirements, conduction properties, physical and chemical constants, etc. See Guide to Locating Information/Data in the TDB.

15.19.9 STABILITY/SHELF LIFE (SL)

This field contains information on the stability of the agent and the effects of temperature, light, methods of storage, etc., on agent.

15.19.10 VAPOR PRESSURE (VAP)

This contains vapor pressure information regarding the agent.

15.20 STATUS (ST)

This is a "print only" field, describing the status of the substance. It includes a date (month, day, year) plus a statement from one of the following categories:

- a. Complete with peer review comments incorporated
- b. No data available from current Source List
- c. Data processing in progress

<u>Abbreviation</u>	<u>Name</u>	<u>Search</u>	<u>Print</u>	<u>Manual Section</u>
ACTN	Mechanism of Action		X	15.16.11
ADE	Absorption, Distribution, Excretion		X	15.16.1
ANTR	Antidote and Treatment		X	15.16.4
ATEX	Animal Toxicity Excerpts		X	15.13.1
ATKW	Animal Toxicity Keywords		X	15.14.1
BP	Boiling Point		X	15.19.1
CF	Color/Form		X	15.19.2
CMU	Classification-Major Use		X	15.18.1
CPAT	Consumption Pattern		X	15.18.6
DEN	Density/Specific Gravity		X	15.19.3
DISP	Disposal Methods		X	15.17.7
DL	Detailed		X	15.4
	ENVIRON		X	15.17
(ENVR)	Environmental Information	X		15.17
ENVS	Environmental Information		X	15.17
EVLM	Environmental/Occupational Exposure & Limits		X	15.17.1
(EX)	Excerpts	X		15.13
EXS	Excerpts		X	15.13
EXPT	U.S. Exports		X	15.18.9
EXPL	Explosive Limits		X	15.17.4
(FF)	Molecular Formula Fragments	X		15.11
FP	Flash Point		X	15.19.4
FPOT	Fire Potential		X	15.17.3
HTEX	Human Toxicity Excerpts		X	15.13.2
HTKW	Human Toxicity Keywords		X	15.14.2
IDIO	Idiosyncrasies		X	15.16.8
IMPT	U.S. Imports		X	15.18.8
INCN	Interactants		X	15.14.3
INDX	Therapeutic Index		X	15.16.9
INEX	Interactions-Excerpts		X	15.13.3
(IX)	Index Strings (Keywords)	X		15.14
IXS	Index Strings (Keywords)		X	15.14
	INDEXSTR		X	15.14
LMEX	Laboratory Methods Excerpts		X	15.13.4
LMKW	Laboratory Methods Keywords		X	15.14.4
	MANUFACT		X	15.18
(MANF)	Manufacturing Data	X		15.18
MANS	Manufacturing Data		X	15.18
MAXF	Maximum Daily Dose, Fatal Dose		X	15.15.5
METB	Metabolism		X	15.16.2

<u>Abbreviation</u>	<u>Name</u>	<u>Search</u>	<u>Print</u>	<u>Manual Section</u>	<u>Page</u>
	Molecular Formula	X	X	15.10	7
NF	Minimum Fatal Dose	X	X	15.15.2	12
A	Most Probable Method of Manufacture (U.S.)	X	X	15.18.3	15
I	Manufacturing Information	X	X	15.18.4	15
S	Manufacturers	X	X	15.18.5	15
	Melting Point	X	X	15.19.5	16
DI	Molecular Weight	X	X	15.19.6	16
F)	Maximum Daily Intake	X	X	15.15.3	12
	Name Fragments	X	X	15.9	7
TH	Name of Substance	X	X	15.8	6
TS	Pharmacotherapy	X	X	15.16.5	13
HTX)	Pharmacology/ Toxicology	X	X	15.16	12
	Pharmacology- Toxicology	X	X	15.16	12
	PHARMTOX	X	X	15.16	12
OLP	Pollution Potential	X	X	15.17.2	14
	PHYSPROP	X	X	15.19	16
	Chemical-Physical Properties	X	X	15.19	16
POT	Poisoning Potential	X	X	15.16.3	13
ADL	Radiation Limits & Pot.	X	X	15.17.5	14
	Chemical Abstracts Service (CAS)	X	X	15.6	6
	Registry Number	X	X	15.4	3
	STANDARD	X	X	15.17.6	14
IIP	Shipment Methods	X	X	15.19.9	17
	Stability/Shelf Life	X	X	15.19.7	16
OL	Solubility	X	X	15.19.8	16
	Spectral and Other Properties	X	X	15.20	17
T	Status	X	X	15.7	6
	Synonyms	X	X	15.5	6
DBN	Toxicology Data Bank Number	X	X	15.16.6	13
HER	Therapeutic Use	X	X	15.15.4	12
LIM	Threshold Limit Value	X	X	15.16.10	13
DLR	Tolerance and Resistance	X	X	15.15	11
DXV	Toxicity Values	X	X	15.18.2	15
SE	Uses	X	X	15.18.7	15
SP	U.S. Production	X	X	15.15	11
ALS	Value	X	X	15.15	11
VALU)	Values	X	X	15.19.10	17
AP	Vapor Pressure	X	X	15.16.7	13
ARN	Warning/Cautions	X	X	15.12	8
L	Wiswesser Line Notation	X	X		

Site, Systems, Physiological Phenomena index strings (IX)

1. Musculoskeletal System
2. Respiratory System
3. Urogenital System (except Kidney)
4. Cardiovascular System
5. Nervous System
6. Taste
7. Eye
8. Ear
9. Digestive System (except Liver) (includes vomiting and diarrhea)
10. Liver
11. Kidney
12. Body fluids and secretions
13. Mouth and Teeth
14. Hemic and Lymphatic Systems (includes adenopathy)
15. Skin
16. Endocrine System
17. Metabolism and Nutrition
18. Immune System (includes Infections and Superinfections)
19. Psychological Processes
20. Pregnancy (includes all chemicals affecting pregnancy, the fetus, newb
human, or animal)
21. Pancreas
22. Application Site
23. Laboratory Tests (includes interference with tests, i.e., positive
pregnancy test in non-pregnant patient)
24. Chromosomes
25. Disease Aggravation (If drug or chemical aggravates pre-existing disease)
26. Carcinogenesis (includes all benign or malignant tumors caused by chemicals
also negative result(s))

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
absorption coefficient (factor)		SP	Spectral and Other Properties	-
absorption, <u>in vivo</u>	(PHTX)	ADE	Absorption, Distribution, Excretion	-
absorption spectra data		SP	Spectral and Other Properties	-
accumulation, <i>in vivo</i>	(PHTX)	ADE	Absorption, Distribution, Excretion	-
accumulation, environmental	(ENVR)	POLP	Pollution Potential	-
acid reaction requirements		SP	Spectral and Other Properties	-
adverse effects - drugs (from chemotherapy or abuse)	(PHTX)	PHTH	Pharmacotherapy	ADVERSE EFFECTS:
adverse effects - non-drugs	(PHTX)	PPOT	Poisoning Potential	ADVERSE EFFECTS:
animal toxicity excerpts	(EX)	EXS ATEX	Animal Toxicity Excerpts	ADVERSE EFFECTS:
animal toxicity keywords	(IX)	IXS ATKW	Animal Toxicity Keywords	ADVERSE EFFECTS:
antidotes	(PHTX)	ANTR	Antidote and Treatment	ANTIDOTE:
assays of grade and purity	(MANF)	MMI	Manufacturing Information	PRODUCT ANALYSIS:
autoignition temperature	(ENVR)	FPOT	Fire Potential	AUTO IGNITION TEMPERATURE:
autoxidation formation		SP	Spectral and Other Properties	-
boiling point		BP	Boiling Point	-
bulk storage requirements	(ENVR)	SHIP	Shipment Methods	STORAGE REQUIREMENTS:

or excerpts, keywords only, the hits are printed with "PRT EXS, "PRT IXS. To view all information one must
COMPLETE. i.e., "PRT NM, ATEX COMPLETE to obtain name of substance and all animal toxicity excerpts.

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
MS Number	(RN)	RN	Chem. Abstr. Serv. Reg. No.	-
Cautions	(PHTX)	WARN	Warnings, Cautions	-
Changes with age (in the compound)		SL	Stability/Shelf Life	-
Chemical Abstracts Service Registry Number	(RN)	RN	Chemical Abstracts Service (CAS) Registry Number	-
Chemical name	(SY)	NM, SY	Name of Substance; Synonyms	-
Chromatographic characteristics		SP	Spectral and Other Properties	-
Classification by major use	(MANF)	CMU	Classification by Major Use	-
Clinical tests for title compound	(EX)	EXS LMEX*	Laboratory Methods Excerpt	-
Color		CF	Color/Form	-
Compatibility in formulation	(MANF)	MMI	Manufacturing Information	COMPATIBILITIES:
Compatibility for therapeutic use	(PHTX)	PHTH	Pharmacootherapy	COMPATIBILITIES:
Conditions leading to exposures	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	OCCUPATIONAL EXPOSURE:
Conduction properties		SP	Spectral and Other Properties	-
Constants (various physical and chemical: K _a , p _{ka} , p _{Kb} , p _{K1} , p _{K2} , etc.)	(MANF)	MMI	Manufacturing Information	CONSTITUENTS:
Constituents (of natural products)	(MANF)	CPAT	Consumption Pattern	-

conversion factors/equivalencies		SP	Spectral and Other Properties	
corrosive characteristics		SL	Stability and Shelf Life	-
crystals (forms, shape)	CF	Color/Form		-
deficiency and disease states for which drug is prescribed	(PHTX)	PHTH	Pharmaco-therapy	Therapeutic Use:
deficiency syndrome - description	(PHTX)	PHTH	Pharmaco-therapy	Deficiency Syndrome:
degradation in environment	(ENV)	POLP	Pollution Potential	-
deliquescence		SL	Stability and Shelf Life	-
density		DEN	Density/Specific Gravity	-
diagnostic methods and tests	(PHTX)	ANTR	Antidote and Treatment	Diagnosis:
dipole moment		SP	Spectral and Other Properties	-
disaster hazard: fire explosion human exposure	(ENV)	FPOT (ENV) (PHTX)	Fire Potential Explosive Limits Poisoning Potential	Fire Hazard: Explosion Hazard: Disaster Hazard:
disposal methods	(ENV)	DISP	Disposal Methods	-
distribution <u>in vivo</u>	(PHTX)	ADE	Absorption, Distribution, Excretion	
electrical properties (charge, etc.)		SP	Spectral and Other Properties	-
energy states		SP	Spectral and Other Properties	-

Information/Data Items	SEARCH ABBREV.	PRINT ABBREV.	DATA ELEMENT NAME	TERM/PHRASE PRECEDING INFORMATION/DATA
environmental degradation		(ENVR)	POLP	Pollution Potential
excretion	(PHTX)	ADE	Absorption, Distribution, Excretion	-
environmental exposure, limits	(ENVR)	EVLM	Environmental & Occupational Exposure and Limits	-
explosion: hazards limits	(ENVR) (ENVR)	EXPL EXPL	Explosive Limits Explosive Limits	EXPLOSION HAZARD: EXPLOSIVE LIMITS:
exposure limits: environmental	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	ENVIRONMENTAL EXPOSURE:
exposure limits: occupational	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	INDUSTRIAL EXPOSURE: OCCUPATIONAL EXPOSURE:
FEMA (Flavoring & Extract Manuf. Assoc.) number for food Additives	(MANF)	MMI	Manufacturing Information	
firefighting methods	(ENVR)	FPOT	Fire Potential	FIREFIGHTING METHODS:
fire hazard	(ENVR)	FPOT	Fire Potential	FIRE HAZARD:
first aid	(PHTX)	ANTR	Antidote and Treatment	TREATMENT:
flammable limits	(ENVR)	FPOT	Fire Potential	FLAMMABLE LIMITS:
flammable properties	(ENVR)	FPOT	Fire Potential	FIRE HAZARD:
flash point	FP	FP	Flash Point	-
form (appearance, solid, liquid, gas)	CE	CE	Color/Form	

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
formula (molecular)	(MF)	MF	Molecular Formula	-
formula fragments, molecular	(FF)	MF	Molecular Formula	-
freezing point	SP		Spectral and Other Properties	-
GRAS (Generally Recognized as Safe) info	(MANF)	MMI	Manufacturing Information	
half-life (in acid or base)		SL	Stability and Shelf Life	-
half-life of title compound in soil	(ENVR)	POLP	Po l l u t i o n P o t e n t i a l	-
half-life, biological	(PHTX)	ADE	Absorption, Distribution, Excretion	
half-life of isotopes	(ENVR)	RADL	Radiation Limits and Potential	EXPOSURE POTENTIAL:
handling requirements	(ENVR)	SHIP	Shipment Methods	HANDLING REQUIREMENTS:
heat of vaporization	SP		Spectral and Other Properties	-
herbicidal uses (specific plants affected)	(EX)	EXS ATEX	Animal Toxicity Excerpts	PHYTO TOXICITY:
historical uses (drugs)	(PHTX)	PHTH	Pharmacotherapy	THERAPEUTIC USES:
*human toxicity excerpts	(EX)	EXS HTEX	Human Toxicity Excerpt	-
*human toxicity keywords	(IX)	IXS HTKW	Human Toxicity Keywords	-
hydrates, characteristics of	SP		Spectral and Other Properties	-

* For excerpts, keywords only, the hits are printed with "PRT EXS, IXS when one searches using (EX), (IX). To view all information, one must add COMPLETE, i.e., "PRT NM, HTEX COMPLETE to obtain name of substance and all human toxicity excerpts.

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
idiosyncracies	(PHTX)	IDIO	Idiosyncracies	-
industrial health hazards	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	OCCUPATIONAL EXPOSURE:
* interactants	(IX)	IXS INCN	Interactants, CAS Reg. No.	-
* interactions, in vivo	(EX)	EXS INEX	Interactions	-
isolation methods	(MANF)	MMI	Manufacturing Information	PREPARATION:
isomers, characteristics of		SP	Spectral and Other Properties	-
isotopes, characteristics of		SP	Spectral and Other Properties	-
isotope, composition of		SP	Spectral and Other Properties	-
* laboratory methods for detection	(EX)	EXS LMEX	Laboratory Methods Excerpt	-
LD-50 values	(VALU)	TOXV	Toxicity Values	-
lethal doses (non-human)	(VALU)	TOXV	Toxicity Values	-
lethal dose (human)	(VALU)	MAXF	Maximum Daily Dose, fatal dose	-
MAC values	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	-
maximum allowable concentrations (MAC)	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	-

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
manufacturing methods, U.S.	(MANF)	MMA	Most Probable Manufacture (U.S.)	
maximum daily intake (human only)	(VALU)	MAXF	Maximum Daily Intake	-
mean lethal dose	(VALU)	TOXV		-
mechanism of action, active ingre.	(PHTX)	ACTN	Mechanism of Action, Active Ingredient	-
median tolerance limits	(VALU)	TOXV	Toxic Dose Values	-
melting point		MP	Melting Point	-
metabolism of title compound	(PHTX)	METB	Metabolism	-
minimum fatal dose (human only)	(VALU)	MINF	Minimum Fatal Dose (Human Only)	-
miscibility		SOL	Solubility	-
MLD (Min. lethal non-human dose)	(VALU)	TOXV	Toxic Dose Value	-
molecular formula	(MF)	MF	Molecular Formula	-
molecular weight		MW	Molecular Weight	-
monitoring procedures	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	PERSONNEL PROTECTION:
name fragments (chemical)	(NF)	SY_NM	Synonyms, Name of Substance	-
natural occurrences	(MANF)	MMI	Manufacturing Information	NATURAL OCCURRENCE:

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
occupational exposure, limits	(ENVR)	EVLM	Environmental and Occupational Exposure Limits	-
odor	SP		Spectral and Other Properties	-
optical rotation	SP		Spectral and Other Properties	-
oxidation reduction potential	SP		Spectral and Other Properties	-
oxidizing characteristics	SL		Stability/Shelf Life	-
patent information (domestic and foreign)	(MANF)	MMI	Manufacturing Information	PATENTS:
persistence in environment	(ENVR)	POLP	Pollution Potential	-
personnel protection	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	PERSONNEL PROTECTION:
pH		SP	Spectral and Other Properties	-
pharmacodynamic action - drugs - (human and vet uses)	(PHTX)	PHTI	Pharmacotherapy	PHARMACODYNAMIC ACTION:
pharmacodynamic action - non-drug (human)	(EX)	EXS HTEX PTH	Human Toxicity Excerpts Pharmacotherapy	PHARMACODYNAMIC ACTION:
pharmacodynamic action - non-drug (non-human)	(EX)	EXS ATEX	Animal Toxicity Excerpts	PHARMACODYNAMIC ACTION:
poisoning potential	(PHTX)	PPOT	Poisoning Potential	-
preparation, methods of	(MANF)	MMI	Manufacturing Information	PREPARATION:

Information/Data Items	Abbrev.	Abbrev.	Data Element Name	Information/Data
preventive measures	(PHTX)	ANTR	Antidote and Treatment	PREVENTIVE MEASURES:
product analysis	(MANF)	MMI	Manufacturing Information	PRODUCT ANALYSIS:
production and distribution	(MANF)	MMI USP EXPT IMPT	Manufacturing Information U.S. Production Exports Imports	PRODUCTION & DISTRIBUTION:
prognosis	(PHTX)	PHTH	Pharmaco-therapy	PROGNOSIS:
proprietary limits in foods	(MANF)	MMI	Manufacturing Information	FORMULATIONS:
radiation exposure limits for workers	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	EXPOSURE LIMITS:
radiation exposure limits	(ENVR)	EVLM	Environmental and Occupational	
radiation exposure limits for general public	(ENVR)	RADL	Radiation Limits and Potential	EXPOSURE LIMITS:
radiation potential	(ENVR)	RADL	Radiation Limits and Potential	EXPOSURE LIMITS:
rate of usage - herbicides, pesticides, etc.	(MANF)	MMI	Manufacturing Information	EXPOSURE POTENTIAL:
recommended daily intake of essential substances	(PHTX)	PHTH	Pharmaco-therapy	APPLICATIONS:
refining methods in manufacture	(MANF)	MMI	Manufacturing Information	DAILY INTAKE:
refractive index		SP	Spectral and Other Properties	PREPARATION:
Registry Number, CAS	(RN)	RN	CAS Registry Number	
registry status of pesticides, etc.	(MANF)	MMI	Manufacturing Information	APPLICATIONS:

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
Sadtler reference numbers		SP	Spectral and Other Properties	-
shelf life		SL	Stability/Shelf Life	-
shipping classifications, regulations	(ENVR)	SHIP	Shipment Methods	SHIPPING REGULATIONS:
solubility (ratios of solubility, effect of temperature, etc.)		SOL	Solubility	-
specific gravity		DEN	Density/Specific Gravity	-
spectral properties		SP	Spectral and Other Properties	-
stability (in air, vacuum, light)		SL	Stability/Shelf Life	-
storage requirements	(ENVR)	SHIP	Shipment Methods	STORAGE REQUIREMENTS:
synonyms	(SY)	SY	Synonyms	-
tarnishing characteristics		SL	Stability/Shelf Life	-
taste		SP	Spectral and Other Properties	-
therapeutic index	(PHTX)	INDX	Therapeutic Index	-
therapeutic use - human	(PHTX)	PHTH THER	Pharmacotherapy Therapeutic Use	THERAPEUTIC USE:
therapeutic use - veterinary	(PHTX)	PHTX THER	Pharmacotherapy	THERAPEUTIC USE (VET):
thermal neutron capture cross-section number		SP	Spectral and Other Properties	-
threshold limit values	(VALU)	TLIM	Threshold Limit Value	-
TLV's (threshold limit values)	(VALU)	TLIM	Threshold Limit Value	-

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
*toxicity - human	(EX)	EXS HTEX	Human Toxicity	-
*toxicity - non-human - algae	(EX)	EXS ATEX	Animal Toxicity	ALGICIDAL ACTION:
animals other than man (both invertebrate and vertebrate)	EX	ATEX	Animal Toxicity	-
bacteria	EX	EXS ATEX	Animal Toxicity	ANTIMICROBIAL ACTION:
fungi	EX	EXS ATEX	Animal Toxicity	FUNGICIDAL ACTION:
higher plants	EX	EXS ATEX	Animal Toxicity	PHYTOTOXICITY:
toxic levels - related to therapeutic uses	(PHTX)	PHTH	Pharmacotherapy	TOXIC LEVELS:
toxic levels - related to non-therapeutic uses	(PHTX)	PPOT	Poisoning Potential	TOXIC LEVELS:
Toxicology Data Bank record number	(TDBN)	TDBN	TDB number	-
treatment	(PHTX)	ANTR	Antidote & Treatment	-
underwriters lab classification no.	(ENVR)	FPOT	Fire Potential	-
uses (briefly stated)	(MANF)	USE	Major Uses	-
uses , therapeutic	(PHTX)	THER	Therapeutic Uses	APPLICATIONS:

* When one searches using (EX), (IX), only the "hits" print when one enters "PRT EXS, IXS. To view all information, one must add COMPLETE, i.e., "PRT NM, HTEX COMPLETE.

Information/Data Items	Search Abbrev.	PRINT Abbrev.	DATA ELEMENT NAME	Term/Phrase Preceding Information/Data
USOS standards	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	-
U.S. exports	(MANF)	EXPT	U.S. Exports	-
U.S. imports	(MANF)	IMPT	U.S. Imports	-
U.S. production	(MANF)	USP	U.S. Production	-
valence states		SP	Spectral and Other Properties	-
vapor density		SP	Spectral and Other Properties	-
vapor pressure		VAP	Vapor Pressure	-
ventilation control	(ENVR)	EVLM	Environmental and Occupational Exposure and Limits	VENTILATION CONTROL:
viscosity		SP	Spectral and Other Properties	-
volatility		SL	Stability/Shelf Life	-
warnings	(PHTX)	WARN	Warnings, Cautions	-
warning labels	(ENVR)	SHIP	Shipment Methods	SIPPING REGULATIONS:
Wissesser Line Notation (WLN)	(WL)	WL	Wissesser Line Notation	-

September, 1978

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Abbreviations used in TDB

AND	CORP	CORPORATION(S)
AT	CP	COMMERCIALLY PURE
ANGSTROM	CSF	CEREBROSPINAL FLUID
ABSOLUTE	CU	CUBIC
ACCUMULATE(S, ED, ION)	CUSTMS	CUSTOMS
ADDITION(AL)	DC	DIRECT CURRENT
AD LIBITUM	DC	DISTRICT OF COLUMBIA
ADMINISTRATION, ADMINISTERED	DECOMP	DECOMPOSES, DECOMPOSITION
ACTIVE INGREDIENT (Pesticides, herbicides only)	DECR	DECREASE(S, D, ING)
ALABAMA	DEG	DEGREE
ALASKA	DEL	DELAWARE
BEFORE NOON	DEPT	DEPARTMENT
AMPERE	DERIV(S)	DERIVATIVE(S)
AMOUNT(S)	DIAM	DIAMETER
ANALYSIS(ES)	DIL	DILUTE
ANHYDROUS	DISTD	DISTILLED
APPROXIMATE(LY)	DIST(S)	DISTRICT(S)
QUEOUS	DIV(S)	DIVISION(S)
ARKANSAS	DNA	DESOXYRIBONUCLEIC ACID
	DNASE	DESOXYRIBONUCLEASE
	DOT	DEPARTMENT OF TRANSPORTATION
ARIZ		
ASSOC		
ATM		
AIL		
HYD		
PROX		
RK		
IZ		
OCHEM(S)	ARIZONA	DOZ
OL	ASSOCIATE(S, ED, ION)	DRAM(S)
MR	ATMOSPHERE(S)--The unit	DIFFERENTIAL THERMAL
U	AVAILABLE(ABILITY)	ANALYSIS
A	AVERAGE	EMULSIFIABLE CONCEN-
AL	BIOCHEMICALS(S)	TRATE (Pesticides and herbicides only)
ALIF	BIOLOGY(ICAL)	EFFECTIVE DOSE
C	BASAL METABOLIC RATE	ELECTROENCEPHALOGRAM
G	BOILING POINT	(GRAPH)
HEM(S)	BRITISH THERMAL UNIT(S)	FOR EXAMPLE
I	CENTIGRADE--The unit	ELECTROCARDIOGRAM(GRAPH)
CM	ABOUT	ELECTROMOTIVE FORCE
NS	CALORIE(S)	ELECTROMYOGRAM(GRAPH)
D(S)	CALIFORNIA	ELECTRON PARAMAGNETIC
DEF	CUBIC CENTIMETER(S)	RESONANCE
OMPD	CLOSED CUP (in reporting flash point)	EQUILIBRIUM
ONCN	COAST GUARD	EQUIVALENT(S)
NN	CHEMICAL(S)	ESPECIALLY
	CURIE	ELECTRON SPIN RESONANCE
	CENTIMETER(S)	ESTIMATE(S, D)
	CENTRAL NERVOUS SYSTEM	ELECTROSTATIC UNIT
	COMPANY(IES)	ETHYL--The radical
	COEFFICIENT(S)	EVAPORATE(D), EVAPORATION
	COMPOUND(S)	EXAMINATION(S), EXAMINE
	CONCENTRATION(S)	EXPERIMENT(S)
	CONCENTRATE(D)	
	CONNECTICUT	

EXPTL	EXPERIMENTAL(LY)	MAX	MAXIMUM
F	FAHRENHEIT	MCI	MILLICURIE
FED	FEDERAL	MD	MARYLAND
FLA	FLORIDA	ME	MAINE
FP	FREEZING POINT	ME	METHYL--The radical
FT	FOOT, FEET	MECH	MECHANICAL(LY)
G	GRAM(S)	METAB	METABOLISM
(G)	GAS, as in H ₂ (G)	MFR	MANUFACTURE
GA	GEORGIA	MG	MILLIGRAM(S)
GAL	GALLON(S)	MICH	MICHIGAN
GI	GASTROINTESTINAL	MIN	MINIMUM
GLC	GAS LIQUID CHROMATOGRAPHY		
GR	GRAIN(S)	MIN	MINUTE(S)
HA	HECTARE	MINN	MINNESOTA
HB	HEMOGLOBIN	MISC	MISCELLANEOUS
HB02	OXYGENATED HEMOGLOBIN	MISS	MISSISSIPPI
HR	HOUR(S)	MIXT	MIXTURE(S)
IATA	INTERNATIONAL AIR TRANSPORT ASSOCIATION	ML	MILLILITER(S)
ID	INFECTIVE DOSE	MLD	MINIMUM LETHAL DOSE
ID	INTRADERMAL(LY)	MO	MONTH(S)
IE	THAT IS	MO	MISSOURI
ILL	ILLINOIS	MOL	MOLECULE(S, AR)
IM	INTRAMUSCULAR(LY)	MOL WT	MOLECULAR WEIGHT
IN	INCH(ES)	MONT	MONTANA
INC	INCORPORATED	MM	MILLIMETER(S)
INCL	INCLUDE(S, ING)	MP	MELTING POINT
INCOMP	INCOMPATIBLE	MU	MILLIMICRON(S)
INCR	INCREASE(S, ING)	N	NORMAL (As applied to concentration)
IND	INDIANA	NC	NORTH CAROLINA
INDUST	INDUSTRIES, INDUSTRIAL	ND	NORTH DATAOTA or NO DATA
INORG	INORGANIC	NEB	NEBRASKA
INSOL	INSOLUBLE	NEG	NEGATIVE(LY)
INT	INTERMEDIATE(S)	NEV	NEVADA
IP	INTRAPERITONEAL(LY)	NH	NEW HAMPSHIRE
IR	INFRARED	NJ	NEW JERSEY
IRRADN	IRRADIATION	NM	NANOMETER(S)
IU	INTERNATIONAL UNIT	NM	NEW MEXICO
IV	INTRAVENOUS(LY)	NMR	NUCLEAR MAGNETIC RESONANCE
K	KELVIN--The unit		NEW YORK
KANS	KANSAS	NY	ORTHO
KCAL	KILOCALORIE(S)	O-	OPEN CUP (in reporting flash point)
KG	KILOGRAM(S)	OC	OKLAHOMA
KM	KILOMETER(S)		OREGON
KY	KENTUCKY	OKLA	ORGANIC
L	LITER(S)	ORE	OXIDATION
(L)	LIQUID AS IN CS ₂ (L)	ORG	OUNCE(S)
LA	LOUISIANA	OXIDN	PARA
LAB	LABORATORY	OZ	
LB	POUND(S)	P-	
LIQ	LIQUID		
M-	META		
M	METER(S)		
MASS	MASSACHUSETTS		

OCHEM

PENNSYLVANIA
PERCENT
PETROCHEMICAL(S)

PHYSICAL(LY)	SP	SPECIFIC--Used to qualify a physical constant
AFTERNOON	SP	SPECIES--in taxonomy
POSITIVE(LY)	ST	SAINT
POWDER(ED, S)	STD	STANDARD
PARTS PER BILLION	SUBSID(S)	SUBSIDIARY(IES)
PARTS PER MILLION	SQ	SQUARE, as in sq inch
PRECIPITATE(D, S)	SYNTH	SYNTHESIS
PRECIPITATION	TEMP(S)	TEMPERATURE(S)
PROPYL (normal)--The radical	TENN	TENNESSEE
PUERTO RICO	TEX	TEXAS
PREPARED	TID	THREE TIMES A DAY
PREPARATION(S)	TITRN	TITRATION
PRINCIPAL(LY)	TLC	THIN LAYER CHROMATOGRAPHY
PROPORTION(S)	U	MICRON(S)
PRODUCTION(S)	UCI	MICROCURIE
POUNDS PER SQUARE INCH	UG	MICROGRAM
PATIENT(S)	US	UNITED STATES
FOUR TIMES A DAY	USP	UNITED STATES
QUART(S)	UV	PHARMACOPEIA
QUALITATIVE(LY)	VA	ULTRAVIOLET
QUANTITATIVE(LY)	VET	VIRGINIA
ROENTGEN(S)	VOL	VETERINARY
RED BLOOD CELLS	VT	VOLUME
REDUCTION	WASH	VERMONT
RESPIRATION(ORY)	WBC	WASHINGTON
REFERENCE	WISC	WHITE BLOOD CELLS
RHODE ISLAND	WK	WISCONSIN
RIBONUCLEIC ACID	WP	WEEK(S)
MESSENGER RNA	WT	WETTABLE POWDER (Pesticides, herbicides only)
RIBOSOMAL RNA	W VA	WEIGHT
TRANSFER RNA	WYO	WEST VIRGINIA
REVOLUTIONS PER MINUTE	YR(S)	WYOMING
SOLID AS IN AGGL(S)		YEAR(S)
SOUTH CAROLINA		
SUBCUTANEOUS(LY)		
SECOND(S)--Time unit only		
SOUTH DAKOTA		
SEPARATION		
SOLUBLE		
SOLUTION		

Certain terms (e.g. TLV) and the names of certain organizations (e.g. ACGIH, FDA) are most widely known by their abbreviations or acronyms. These are used as recorded in the sources whenever they appear.

A.

SAMPLE SEARCHES

1. What chemicals in the Toxicology Data Bank (TDB) have been associated with a hairy tongue effect?
2. What other human toxicity do you have for one of the chemicals?
3. What are the warnings associated with the chemical?
4. Does tolerance and/or resistance develop with its use?

USER:

"FILE TDB

PROG:

YOU ARE NOW CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

SS 1 /C?

USER:

(EX) HAIRY AND ALL TONGUE:

PROG:

SS (1) PSTG (3)

SS 2 /C?

USER:

"PRT EXS

PROG:

NM - BUTAPERAZINE MALEATE

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

HTEX- AMER SOC HOSP PHARM 1970 WHITE OR BLACK, HAIRY TONGUE OR BAL BEEFY, RED TONGUE & THIN, WHITE PSEUDOMEMBRANE FORMATION IN ORA CAVITY /GI EFFECTS/. MODERATE BREAST ENGORGEMENT & LACTATION...I WOMEN TAKING LARGE DOSES...AMENORRHEA, DELAYED OVULATION, MENSTRUAL IRREGULARITIES...INCREASED LIBIDO /ADVERSE EFFECT, ORAL/

NM - NAFCILLIN SODIUM

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

HTEX- AMER SOC HOSP PHARM 1974 URTICARIAL-LIKE REACTION OF GASTRIC MUCOSA...NAUSEA, VOMITING, EPIGASTRIC DISTRESS, DIARRHEA & BLAC HAIRY TONGUE /ADVERSE EFFECT, ORAL/

NM - HYDROGEN PEROXIDE

ST - 080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

HTEX- GOODMAN. PHARM BASIS THERAP 4TH ED 1047 THE CONTINUED USE OF HYDROGEN PEROXIDE SOLUTION AS A MOUTHWASH, EVEN IN HALF STRENGTH MAY CAUSE HYPERATROPHIED FILIFORM PAPILLAE OF THE TONGUE (HAIRY TONGUE) BUT THESE DISAPPEAR AFTER DRUG IS DISCONTINUED.

/C?

1 EXS, IXS

BUTAPERAZINE MALEATE

082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

BUTAPERAZINE MALEATE

082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

AMER SOC HOSP PHARM 1970 WHITE OR BLACK, HAIRY TONGUE OR BALD,
BEEFY, RED TONGUE & THIN, WHITE PSEUDOMEMBRANE FORMATION IN ORAL
CAVITY /GI EFFECTS/. MODERATE BREAST ENGORGEMENT & LACTATION...IN
WOMEN TAKING LARGE DOSES...AMENORRHEA, DELAYED OVULATION,
MENSTRUAL IRREGULARITIES...INCREASED LIBIDO /ADVERSE EFFECT,
ORAL/

ND;;ND;ORAL;MOUTH AND TEETH;MOUTH DISEASES;TONGUE, HAIRY;TONGUE
DISEASES

ND;;FEMALE;;ORAL;UROGENITAL SYSTEM;AMENORRHEA;MENSTRUATION
DISORDERS;BREAST DISEASES;LACTATION;OVULATION

ND;;FEMALE;;ORAL;PSYCHOLOGICAL PROCESSES;LIBIDO

/C?

TONGUE, HAIRY

> PSTG (3)

/C?

NM

BUTAPERAZINE MALEATE

NAFCILLIN SODIUM

HYDROGEN PEROXIDE

SS 3 /C?

USER:

"PRT 1 NM, HTEX COMPLETE

PROG:

NM - BUTAPERAZINE MALEATE

- HTEX- AMER SOC HOSP PHARM 1970 HYPERSENSITIVITY REACTIONS...CHOLESTATIC JAUNDICE, BLOODYDYSCRASIAS, DERMATOSES PHOTOSensitivity, generally...WITHIN 1ST FEW MO...OCCASIONALLY...AFTER DRUG...DISCONTINUED. CHOLESTATIC JAUNDICE...USUALLY WITHIN 2 TO 4 WK...IN APPROX 0.1 TO 4 % OF PATIENTS /ADVERSE EFFECT, ORAL/
- HTEX- AMER SOC HOSP PHARM 1970 NEONATAL JAUNDICE...EXTRAPYRAMIDAL SYMPTOMS...IN NEWBORNINFANTS WHOSE MOTHERS RECEIVED PHENOTHIAZINES DURING PREGNANCY...CHILDREN WITH ACUTE ILLNESS DEHYDRATION /HAVE/ INCREASED SUSCEPTIBILITY...TO NEUROMUSCULAR REACTIONS /ADVERSE EFFECT, ORAL/
- HTEX- AMER SOC HOSP PHARM 1970 ANAPHYLACTOID REACTIONS...MILD TO MODERATE DROWSINESS, PARTICULARLY DURING 1ST 2 WK...RESTLESSNESS, ANXIETY, & JITTERS...COMMON...DYSKINETIC REACTIONS INVOLVING MUSCLES ABOUT FACE & NECK, PERIORAL SPASMS...PROTRUSION OF TONGUE, MANDIBULAR TICS...OCULODYRYRIC CRISES, TORTICOLLIS /ADVERSE EFFECT, ORAL/
- HTEX- AMER SOC HOSP PHARM 1970 EXTRAPYRAMIDAL SYMPTOMS...DYSTONIA, AKATHISIA...MOST FREQUENTLY IN CHILDREN, ESPECIALLY...WITH ACUTE INFECTIONS OR SEVERE DEHYDRATION...IN ELDERLY PATIENTS, ESPECIALLY...WITH BRAIN DAMAGE /PARKINSONISM SYMPTOMS PREDOMINANT/ & RARELY/ DYSKINESIA /OF FACE, TONGUE & JAW LASTING FOR YR. /ADVERSE EFFECT/
- HTEX- AMER SOC HOSP PHARM 1970 CONVULSIVE SEIZURES...RARELY, ACUTE PSYCHOTIC REACTIONS & TOXIC CONFUSIONAL STATES /PARTICULARLY ELDERLY/. ABNORMALITY OF CSF PROTEINS...HYPOTENSION, INCREASED PULSE RATE, TACHYCARDIA, FAINTING...DIZZINESS..."HYPOTENSIVE CRISES"...RARELY...FATAL CARDIAC ARREST /ADVERSE EFFECT, ORAL/
- CONTINUE PRINTING? (YES/NO)
-

C?

M, WARN

BUTAPERAZINE MALEATE

AMER SOC HOSP PHARM 1967 PHENOTHIAZINES OF PIPERAZINE SERIES HAVE GREATER TENDENCY TO PRODUCE EXTRAPYRAMIDAL REACTIONS THAN... OTHER PHENOTHIAZINES... NOT RECOMMENDED FOR USE DURING PREGNANCY. SAFETY FOR USE IN CHILDREN YOUNGER THAN 12 YR OF AGE... NOT... ESTABLISHED

AMER SOC HOSP PHARM 1967 ELDERLY OR DEBILITATED PATIENTS MAY NOT TOLERATE USUAL DOSAGE

AMER SOC HOSP PHARM 1970 HYPOTENSION MAY BE A PARTICULAR PROBLEM IN PATIENTS WITH PHEOCHROMOCYTOMA OR MITRAL INSUFFICIENCY

AMER SOC HOSP PHARM 1970 EMESIS CAUSED BY ACTION OF DRUGS THROUGH NODOSE GANGLION OR BY LOCAL ACTION ON GI TRACT... NOT GENERALLY ANTAGONIZED BY PHENOTHIAZINES... SHOULD BE USED CAUTIOUSLY IN PATIENTS WITH ALCOHOLIC LIVER DISEASE... MAY INCREASE SEVERITY OF DEPRESSIVE REACTIONS

AMER SOC HOSP PHARM 1970 PHENOTHIAZINES... DO NOT APPEAR TO BE OF VALUE IN TREATING HYSTERIA OR OBSESSIVE-COMPULSIVE REACTIONS... COMBINATIONS OF PSYCHOTHERAPEUTIC AGENTS SHOULD BE USED WITH CARE & ARE BEST AVOIDED... IN PATIENTS WITH MILD & TRANSIENT DISORDERS

AMER SOC HOSP PHARM 1970 WHEN COMBINATION THERAPY IS REQUIRED /OR/ WHENEVER DOSAGE ADJUSTMENT IS NECESSARY, /DOSAGE SHOULD BE DETERMINED BY ADMINISTERING EACH DRUG SEPARATELY/. POSSIBILITY THAT /ALL REACTIONS REPORTED FOR THE PHENOTHIAZINES MAY OCCUR WITH EACH INDIVIDUAL PHENOTHIAZINE/

AMER SOC HOSP PHARM 1970 PHYSICIAN SHOULD BE ALERT TO SIGNS OF CHOLESTATIC JAUNDICE... IF SIGNS OF JAUNDICE OCCUR, DRUG SHOULD BE DISCONTINUED IMMEDIATELY. WEEKLY URINE BILIRUBIN TESTS... MAY DETECT REACTION... CLINICAL RECOVERY /USUALLY/ WITHIN A FEW WK /BUT/ HISTOPATHOLOGICAL CHANGES MAY PERSIST FOR LONGER PERIODS

IE PRINTING? (YES/NO)

• • •

C?

NM, TOLR

BUTAPERAZINE MALEATE

AMER SOC HOSP PHARM 1970 TOLERANCE USUALLY DEVELOPS TO HYPOTENSIVE EFFECTS OF /PHENOTHIAZINES/

C?

B .

What chemicals cause peripheral nerve diseases?

YOU ARE ALREADY CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

SS 1 /C?

USER:

(IX) PERIPHERAL NERVE DISEASES

PROG:

SS (1) PSTG (17)

SS 2 /C?

USER:

"PRT 3

PROG:

NM - METHIMAZOLE

RN - 60-56-0

MF - C4-H6-N2-S

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

NM - DISULFIRAM

RN - 97-77-8

MF - C10-H20-N2-S4

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

NM - NITROFURANTOIN

RN - 67-20-9

MF - C8-H6-N4-O5

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

SS 2 /C?

USER:

"PRT 1 EXS, IXS

PROG:

NM - METHIMAZOLE

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

NM - METHIMAZOLE

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

HTEX- AMER SOC HOSP PHARM 1963 GI DISTURBANCES, HEPATIC DAMAGE, ARTHRALGIA, VISUAL DISTURBANCES, HEADACHE, DROWSINESS, & VERTIGO /RARELY/ EDEMA, LOSS OF TASTE, VASCULAR PURPURA, PARESTHESIAS, NEUROPATHY, HAIR LOSS, CUTANEOUS PIGMENTATION, & HYPOPROTHROMBINEMIA /ADVERSE EFFECT, ORAL/

HTKWI- ND;;ND;ORAL;ND;HEADACHE;EDEMA

ND;;ND;ORAL;LIVER;LIVER DISEASES

ND;;ND;ORAL;NERVOUS SYSTEM;NERVOUS SYSTEM DISEASES;PARESTHESIA

HYPERSOMMIA;VERTIGO;PERIPHERAL NERVE DISEASES

ND;;ND;ORAL;MUSCULOSKELETAL SYSTEM;JOINTS;PAIN

ND;;ND;ORAL;EYE;VISION DISORDERS

ND;;ND;ORAL;TASTE;TASTE DISORDERS

ND;;ND;ORAL;CARDIOVASCULAR SYSTEM;VASCULAR DISEASES

ND;;ND;ORAL;SKIN;ALOPECIA;PIGMENTATION DISORDERS

ND;;ND;ORAL;HEMIC AND LYMPHATIC SYSTEMS;HYPOPROTHROMBINEMIAS

1. Is Nafcillin Sodium one of the chemicals in the TDB?
2. What does it interact with?

/C?

E TDB

ARE ALREADY CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

/C?

NAFCILLIN SODIUM

INGS TERM

2 NAFCILLIN (PHTX)
1 NAFCILLIN (MANF)
1 NAFCILLIN SODIUM (SY)
1 NAFCILLIN SODIUM (IX)
1 NAFCILLINBY (PHTX)

OR DOWN N?

D NAFCILLIN SODIUM (SY)

1) PSTG (1)

/C?

- NAFCILLIN SODIUM

- 985-16-0

- C21-H21-N2-NA-05-S

- 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

SS 2 /C?

USER:

(IX) NAFCILLIN SODIUM

PROG:

SS (2) PSTG (1)

SS 3 /C?

USER:

"PRT IXS

PROG:

NM - NAFCILLIN SODIUM

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

INCN- 000985160;NAFCILLIN SODIUM

000050782;ASPIRIN

INCN- 000985160;NAFCILLIN SODIUM

000057669;PROBENECID

ND;ALKALIES

ND;ALUMINUM HYDROXIDE

ND;ANTACIDS

SS 3 /C?

USER:

"PRT EXS, IXS

PROG:

NM - NAFCILLIN SODIUM

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

NM - NAFCILLIN SODIUM

ST - 082178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

INEX- MARTIN. HAZARDS OF MEDICATION 1971 694 INTERACTANT:

ACETYLSALICYLIC ACID. ASPIRIN POTENTIATES NAFCILLIN BY DISPLACING IT FROM PROTEIN BINDING SITES.

INCN- 000985160;NAFCILLIN SODIUM

000050782;ASPIRIN

INEX- AMER SOC HOSP PHARM 1974 PROBENECID INCREASES & PROLONGS SERUM PENICILLIN LEVELS /50-300 %/...CSF LEVELS ARE ALSO INCREASED...EXCESSIVE AMT OF ALKALI MAY DESTROY PENICILLIN, & ANTACIDS (EG ALUMINUM HYDROXIDE GEL) MAY DELAY ABSORPTION BY ABSORBING PENICILLIN

INCN- 000985160;NAFCILLIN SODIUM

000057669;PROBENECID

ND;ALKALIES

ND;ALUMINUM HYDROXIDE

ND;ANTACIDS

SS 3 /C?

Which chemicals in TDB are explosive?

/C?

E TDB

ARE ALREADY CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

/C?

R) ALL EXPLOS:

1) PSTG (194)

/C?

5 NM, EXPL

- CYCLONITE

- SAX. DANGER PROPS INDUS MATER 4TH ED 595 EXPLOSION HAZARD: IT IS ONE OF THE MOST POWERFUL HIGH EXPLOSIVES IN USE TODAY. .../IT/HAS MORE SHATTERING POWER THAT TNT.

- SAX. DANGER PROPS INDUS MATER 4TH ED 595 EXPLOSION HAZARD: SEE EXPLOSIVES, HIGH. MODERATE TO DANGEROUS WHEN SEVERELY SHOCKED OR HEATED... PRACTICALLY ALL HIGH EXPLOSIVES USED COMMERCIALLY REQUIRE A DETONATOR OR CAP TO SET THEM OFF...

- AMYLENE

- ENCYC OCCUPAT HEALTH & SAFETY 1971 689 TO PREVENT EXPLOSION HAZARD, MAXIMUM PERMISSIBLE OLEFIN CONCN IN AIR SHOULD NEVER EXCEED ONE-FIFTH OF THE LOWER EXPLOSIVE LIMIT. /OLEFIN/

- 2,4,6-TRINITROPHENOL

- SAX. DANGER PROPS INDUS MATER 4TH ED 1029 EXPLOSION HAZARD: DANGEROUS, WHEN SHOCKED OR EXPOSED TO HEAT... MANY OF ITS SALTS, KNOWN AS PICRATES, ARE MORE SENSITIVE EXPLOSIVES THAN PICRIC ACID.../AND/ MUST BE KEPT OUT OF CONTACT WITH METALS. PICRIC ACID IS A MORE POWERFUL EXPLOSIVE THAN TNT.

- WEAST. HDBK CHEM & PHYS 57TH ED C-433 EXPLODES ABOVE 300 DEG C.

- 4-THIOPRESOL

- SAX. DANGER PROPS INDUS MATER 4TH ED 580 EXPLOSIVE RANGE: 1.35 % AT 300 DEG F. /CRESOL/

- SAX. DANGER PROPS INDUS MATER 4TH ED 580 EXPLOSION HAZARD: SLIGHT, IN FORM OF VAPOR WHEN EXPOSED TO HEAT OR FLAME... /CRESOL/

- 3-THIOPRESOL

CONTINUE PRINTING? (YES/NO)

E.

1. What chemicals have 12 carbon atoms and at least one chlorine?
2. Which of these are used as a herbicide?

SS 1 /C?

USER:

"FILE TDB

PROG:

YOU ARE ALREADY CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

SS 1 /C?

USER:

(FF) C12 AND CL

PROG:

SS (1) PSTG (9)

SS 2 /C?

USER:

(MANF) ALL HERBICID:

PROG:

SS (2) PSTG (67)

SS 3 /C?

USER:

1 AND 2

PROG:

SS (3) PSTG (1)

SS 4 /C?

USER:

"PRT NM, MF, USE, CPAT, CMU

PROG:

NM - 2,4-D-BUTYL ESTER

MF - C12-H14-CL2-03

USE - MARTIN. PESTICIDE MANUAL 4TH ED 147 HERBICIDE FOR WEEDING CEREALS /2,4-D ESTERS/

USE - SRI CONTROL OF BROADLEAF WEEDS IN CEREAL CROPS

USE - SRI CONTROL OF BROADLEAF WEEDS IN SUGAR CANE

USE - SRI CONTROL OF BROADLEAF WEEDS IN TURF

USE - SRI CONTROL OF BROADLEAF WEEDS IN PASTURES

USE - SRI CONTROL OF BROADLEAF WEEDS IN NON-CROP LAND

CPAT- (2,4-DICHLOROPHOXYACETIC ACID AND ESTERS) 75% IN AGRICULTURAL APPLICATIONS; 13% IN INDUSTRIAL AND COMMERCIAL APPLICATIONS; 6% BY GOVT AGENCIES; 6% IN HOME AND GARDEN USE (1972)

CMU - SRI HERBICIDE

SS 4 /C?

TDB

RE NOW CONNECTED TO THE TOXICOLOGY DATA BANK FILE.

IC?

ORAL AND RATS

› PSTG (181)

IC?

LETHAL DOSE 50

› PSTG (60)

IC?

2

› PSTG (5)

IC?

1 IXS, EXS

ISOVALERIC ACID

080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

ISOVALERIC ACID

080178COMPLETE WITH PEER REVIEW COMMENTS INCORPORATED

PATTY. INDUS HYG & TOX 2ND ED VOL2 1783 THE ORAL LD50 IN RATS IS LESS THAN 3200 MG/KG. THE SYMPTOMS WERE WEAKNESS, RETRACTION OF THE ABDOMEN AND VASODILATION. THE UNDILUTED LIQUID WAS A STRONG SKIN IRRITANT IN THE GUINEA PIG.

CHRONIC;RATS;;ORAL;ND;FATIGUE;ABDOMEN;LETHAL DOSE 50

DEATH

CHRONIC;RATS;;ORAL;CARDIOVASCULAR SYSTEM;VASCULAR DISEASES DILATATION, PATHOLOGICND;GUINEA PIGS;;DERMAL;SKIN;DERMATITIS, CONTACT

IC?

1 NM, TOXV

ISOVALERIC ACID

NIOSH. TOXIC SUBSTANCE LIST 1974
1120 MG/KG

444 LD50 MICE INTRAVENOUS

NIOSH. TOXIC SUBSTANCE LIST 1974
3200 MG/KG

444 LD50 RATS ORAL LESS THAN

PATTY. INDUS HYG & TOX 2ND ED VOL2
MG/KG

1783 LD50 RATS ORAL 3200

OTHER ICRDB SUPPORTED PROJECTS

FOR MORE INFORMATION WRITE TO:

ICRDB Program
Office of International Affairs
National Cancer Institute
Blair Building Room 114
8300 Colesville Road
Silver Spring, Maryland 20910
Phone (301) 427-7150



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CANCERLINE

(800) 472-7373

A Computer-Based Cancer Information Service

Cooperation with Cancer Centers and
Other Organizations Around the
World (including WHO, PAHO, UICC,
IARC, etc.)

Committee for International
Collaborative Activities (CICA)

Scientist-to-Scientist Information
Exchange Programs

Cancer Information Dissemination
and Analysis Centers (CIDACs)
Current Cancer Research Project
Analysis Center (CCRESPAC)
Clearinghouse for Ongoing Work in
Cancer Epidemiology

WHAT IS CANCERLINE?

computer-based service for search and retrieval of information on cancer.

consists of three data bases:

- CANCERLIT
- CANCERPROJ
- CLINPROT

CANCERLIT (CANCER LITERature) contains 20,000 abstracts of published cancer literature . . . updated monthly . . . growing at a rate of 40,000 abstracts per year.

CANCERPROJ (CANCER PROjects) contains 20,000 unpublished descriptions of ongoing cancer research projects collected worldwide . . . updated every three months.

CLINPROT (CLINical PROtocols) contains 20,000 summaries of clinical protocols for treating cancer . . . updated every three months.

Local medical libraries or technical information centers can usually make arrangements for CANCERLINE searches through any center linked to the computer system of the National Library of Medicine (NLM).

CANCERLINE is available during the following hours:

- | | |
|--------------------------|-----------------------|
| Mon, Wed, Thurs. | 3 a.m. to 6 p.m. EST |
| Tues | 12 noon to 9 p.m. EST |
| Fri. | 3 a.m. to 9 p.m. EST |

HOW IS IT SEARCHED?

By entering an author's name or any combination of words appearing in the title, abstract, or index term fields.

Search results can be viewed or printed locally at terminals. Longer searches can be printed overnight at NLM and mailed to users the next day.

HOW IS IT ACCESSED?

through terminals at more than 800 locations in the United States and other countries

Charges vary depending on the location, terminal connect time, telephone usage, amount of output, etc.

HOW CAN AN ORGANIZATION BECOME A SEARCH CENTER?

By applying to the ICRDB Program or the National Library of Medicine for an on-line access code.

Centers in the U.S. are charged \$15.00 per connect hour during prime time and \$8.00 during nonprime time. Off-line printout cost 12¢ per page.

EQUIPMENT REQUIRED:

A commercially available teletypewriter connected to a standard telephone line.

TRAINING REQUIRED:

One week of instruction at NLM.

WHAT DOES A SEARCH COST?

16.1 INTRODUCTION

The CANCERLIT (formerly called CANCERLINE) data base, sponsored by the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, contains over 100,000 abstracts of articles relating to all aspects of cancer. The original data base was created from abstracts which had appeared in Cancer Therapy Abstracts from 1967-1973 and in Carcinogenesis Abstracts from 1963-1973.

16.1.1 CANCER THERAPY ABSTRACTS

Cancer Therapy Abstracts, formerly called Cancer Chemotherapy Abstracts, is a monthly publication covering approximately 3,500 biomedical and scientific journals and is sponsored by the National Cancer Institute. It contains citations and abstracts to articles dealing with the treatment of cancer in humans by radiotherapy, immunotherapy, chemotherapy, or surgery. It also contains pre-clinical studies in the development of clinical techniques and references articles relating to all aspects of chemotherapeutic agents.

16.1.2 CARCINOGENESIS ABSTRACTS

Carcinogenesis Abstracts is also a monthly publication sponsored by the National Cancer Institute. It covers over 4,000 biomedical journals and contains reviews, citations and abstracts of articles dealing with the epidemiology, pathogenesis and immunology of cancer. In addition, it references articles relating to all aspects of chemical, physical and viral carcinogenesis.

16.1.3 CONTENT OF CANCERLIT

The scope of the data base has now been enlarged to include not only the selected cancer topics appearing in these two secondary journals, but all other cancer-related articles. In addition, proceedings of meetings, government reports, symposia reports, selected monographs, books and theses, are also abstracted for inclusion in the data base. The collection of materials on all aspects of cancer began in early 1976 and the processing of additional source material began in late 1976. CANCERLIT is updated monthly with approximately 3,000 citations.

All records in the data base contain English abstracts and are retrievable using free-text search, i.e., by typing any significant word which appears in the title, abstract, or index term field.

Information on data base content or search strategy may be obtained by contacting the MEDLARS Management Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/496-6193; or the Data Base Coordinator, ICRDB Program, National Cancer Institute, 9000 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/427-7150.

16.2 ENTERING THE CANCERLIT FILE

The data base can be accessed by entering ELHILL at NLM in the usual manner (see Part 4) and then typing the command "FILE CANCERLINE or "FILE CANCERLIT after any USER: cue.

16.3 CANCERLIT UNIT RECORD

The CANCERLIT unit record is the computer-stored information representing one abstracted document. There are 15 data elements (fields) in CANCERLIT for each record. The table below lists those elements with their two-letter category qualifiers. The table also indicates which elements are directly searchable, which can be searched using the STRINGSEARCH OR SENSEARCH capabilities, and which will be displayed as a result of the three standard "PRINT commands.

Defaults: STRINGSEARCH and SENSEARCH in CANCERLIT default to the Abstract (AB) field if entered without qualification. Unqualified ranging defaults to the Year of Publication field.

The CANCERLIT Unit Record

Category Qualifier	Data Element Name	Directly Searchable	"PRINT	"PRINT FULL	"PRINT DETAILED
SI	Source Identifier	X	X	X	X
AU	Author	X	X	X	X
AA	Author Address			X	X
TI	Title		X	X	X
SO	Source		X	X	X
AB	Abstract			X	X
LA	Language	X		X	X
JT	Journal Title	X			X
YP	Year of Publication	X			X
IS	International Standard Serial Number	X			X
JC	Journal Coden	X			X
PT	Publication Type	X			X
ED	Entry Date	X			X
KW	Keywords				
TW	Text Word	X			

The following is a description of each of the data elements in the unit record:

16.3.1 SOURCE IDENTIFIER (SI)

The source identifier consists of three distinct elements separated by a slash (/). These elements in the format (ABCD/12/12345) include:

1. A four-character alphabetic string identifying those abstracts which will appear in two secondary cancer journals. CATH indicates that the document is within the scope of Cancer Therapy Abstracts and that it has already appeared or soon will appear in that secondary source. CARC identifies the document as within the scope of material collected for Carcinogenesis Abstracts and that this abstract has or soon will appear in that secondary journal. All other cancer related documents will appear with the alphabetic identifier, ICDB.

Prior to January 1977, CARC or CATH in the source identifier indicated that the abstract had already appeared in the corresponding secondary journal.

Since all documents going into CANCERLIT are now selected directly from primary journals, the abstracts appear in the data base before they appear in the secondary sources. This alphabetic tag has been retained to alert users that these citations will, however, soon appear in those NCI-sponsored journals.

- b. A two-character numeric string identifying the year this citation was entered into the data base.

Prior to January 1977, the numeric string identified the publication year of the secondary journal in which a given abstract appeared.

- c. A six-character accession number assigned sequentially as abstracts are processed for the data base.

Prior to January 1977, the accession number was usually the abstract number assigned by the secondary journals at press time.

The source identifier is a unique character string which can be used to identify/retrieve a particular abstract in CANCERLIT. It can be entered as a direct search query.

It is important to remember that prior to 1977, this unique string permitted you to locate a given abstract with a given publication year in one of the two abstracting journals. However, as of January 1977 the SI field no longer has that capability.

The source Identifier (SI) is displayed by all standard "PRINT commands.

16.3.2 AUTHOR (AU)

The name of every author of each article (or monograph, etc.) included in the data base can be entered as a direct search query. Author names must be entered with the surname first, followed by a space and one or two initials, e.g.,

FREIREICH EJ (AU)

It is recommended that the user perform a "NEIGHBOR command to be sure of the exact form(s) in which an author's name appears in the data base. The truncation symbol (:) or the variable character symbol (#) can also be used when you are unsure of the spelling of a surname or the complete or correct initials in a name. (See Part 4 of the Manual for further discussion of these symbols.)

The author name (AU) is displayed by all standard "PRINT commands.

16.3.3 AUTHOR ADDRESS (AA)

The Author Address (or affiliation) field is not directly searchable but is print able and contains as much address information for the primary author as is present in the source document. It contains the present address for the author where this can be determined, and in all other instances it will have the address where the work was actually performed. Some records do not have an author address.

16.3.4 TITLE (TI)

The full title of the article is printable but can be searched directly only by using the STRINGSEARCH capability. Individual word(s) or word fragments from the title are included in the TEXT WORD (TW) field which is described below and which is directly searchable.

When the abstract is the primary record, as it is for meeting abstracts and letters to editors, the title is usually followed by "(Meeting Abstract)" or "(Letter to Editor)". This enables you to know immediately as you browse titles that the record does not contain a summary of a larger document.

When the original document is a book or a collection of articles, this field contains the name of the chapter or segment being abstracted.

The title (TI) is displayed by all standard "PRINT commands.

16.3.5 SOURCE (SO)

The source field is the complete bibliographic citation for the document. For serials, it contains the primary journal source (in the List of Journals Indexed in Index Medicus format), the volume, issue, pagination, and year of publication. For non-serials, it contains the full unabbreviated title of the monograph or report, etc. the editor name, publisher name and address, pagination and year of publication.

This field is not directly searchable, but components of the field (Journal Title and Year of Publication) can be entered as direct search queries and will be described below.

The Source (SO) field is displayed by all standard "PRINT commands.

16.3.6 ABSTRACT (AB)

The abstract can be printed, but can only be searched directly by using the STRINGSEARCH or SENSEARCH capabilities. Individual word(s) and word fragments from the abstracts are included in the Text Word (TW) field and can be entered as direct search queries.

Abstracts which were written by the author and have appeared in the primary journal along with the article have the words "author abstract" enclosed in parentheses at the end of the abstract.

Frequently used words, such as milligrams, intravenous, administered, hour, etc., are always abbreviated. A list of these words along with their abbreviations appears in Appendix 16-C. Other words are often abbreviated but only after initially spelling out the complete word.

NOTE: In order to optimize the SENSEARCH capability with CANCERLIT, more than 90% of the periods in abbreviations have been removed. When using SENSEARCH, refer to format instructions in Part 4 of this Manual.

16.3.7 LANGUAGE (LA)

Each Record has a three-letter abbreviation representing the language in which the original article was published. The abbreviation usually consists of the

first three letters of the language name. The language designation can be entered as a direct search query. For example, PROSTATE (TW) AND FRE (LA) will retrieve abstracts of articles discussing the prostate which were originally published in French.

See Appendix 16-A for the list of language abbreviations.

16.3.8 JOURNAL TITLE (JT)

The journal title field contains the name or an abbreviation of the name of the primary journal in which the abstracted article was originally published. Abbreviations are standardized and are the same abbreviations used in the List of Journals Indexed in Index Medicus (LJI). If the title does not appear in the LJI, it is constructed according to the same principles.

If the abstracted material comes from a non-serial source, this field contains the words: "Non-serial."

Journal title abbreviations can be entered as direct search queries and are also a component of the Source (S0) field.

```
SS 1 /C?  
USER:  
J NATL CANCER INST (JT)  
PROG:  
SS (1) PSTG (2607)
```

16.3.9 YEAR OF PUBLICATION (YP)

The year in which the journal issue containing the article (or the monograph, symposium report, etc.) was published is entered in this field as a two digit number. This field can be entered as a direct search query and can be combined with other searchable elements to limit retrieval to articles published within a given year. For example:

```
ADENOCARCINOMA AND 73 (YP)
```

will retrieve those articles published in 1973 relating to adenocarcinoma. The field is also rangeable and a two-digit number for the year must be used. For example:

```
ADENOCARCINOMA AND FROM 68 TO 71
```

16.3.10 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN for the journal in which an article originally appeared can be entered as a direct search query. It is an eight-digit number with the format 0000-0000. It can be used, as can the Journal Title (JT) and Journal Coden (JC), to restrict a search to a specific journal. For example, 0007-0920 is the ISSN for the British Journal of Cancer. The following entry limits retrieval to that specific journal:

```
SS 1 /C?  
USER:  
FIBROSARCOMA (TW) AND 0007-0920 (IS)
```

PROG:
SS (1) PSTG (23)

Not all records have ISSN's.

16.3.11 JOURNAL CODEN (JC)

The journal coden is a standardized 5-character code designating a specific journal title. Codens for most serial publications can be found in CODEN for Periodical Titles, American Society for Testing Materials (ASTM), Philadelphia, Pennsylvania 1970.

The coden can be entered as a direct search query to limit retrieval to a specific journal title. For example, the journal coden for Cancer is CANCA; the following entry will limit retrieval to articles concerning myeloma which appear only in the journal, Cancer.

SS 1 /C?
USER:
ALL MYELOMA# (TW) AND CANCA (JC)
PROG:
SS (1) PSTG (37)

Not all records have journal codens.

16.3.12 PUBLICATION TYPE (PT)

One of the following eight designations is used to identify the kind of document from which the abstract was prepared:

1. JOURNAL ARTICLE
2. MEETING ABSTRACT (no full text available)
3. MONOGRAPH
4. MEETING PAPER (unpublished paper presented at a meeting)
5. GOVERNMENT REPORT
6. THESIS (includes dissertations)
7. TECHNICAL REPORT (non-govt. reports)
8. LETTER TO EDITOR

Any one of these eight designations can be entered as a direct search query to limit retrieval to specific kinds of source material.

SS 1 /C?
USER:
ADENOCARCINOMA (TW) AND MEETING ABSTRACT (PT)
PROG:
SS (1) PSTG (74)

All abstracts input since April 1977 will have a specific publication type designated. An attempt has been made to identify earlier records but not all have been tagged.

16.3.13 ENTRY DATE (ED)

This data element is a four-character numeric string in the format YYMM, which designates the year and month a given abstract was added to the data base. It

can be entered as a direct search query. For example, the following entry will retrieve all records added during the April 1976 update:

```
SS 1 /C?  
USER:  
7604 (ED)  
PROG:  
SS (1) PSTG (5900)
```

Because CANCERLIT was not regularly updated prior to 1976, all records which were in the data base before January 1, 1976 have an entry date designation, 7512. There was an April 1976 update and a May 1976 update and then from July 1976 on, regular updates each month.

Entry Date is rangeable but the category qualifier must be used, e.g.:

```
LUNG AND FROM 7612 TO 7702 (ED)
```

If the ED qualifier is not used, the computer will appear to be processing the search, but the PSTG message will say, *NONE. This occurs because the ranging capability defaults to Year of Publication if an unqualified ranging query is entered.

16.3.14 KEYWORDS (KW)

The keyword field contains any index terms that have been assigned to an abstract. The terms do not come from a controlled vocabulary and are present in only a small number of records. These terms (keywords) cannot be searched directly, but individual word(s) or word fragments are included in the Text Word (TW) field and can be entered as direct search queries.

The keyword field at present contains no index terms. Sometime during 1978, CANCERLIT records will be indexed with terms from an "authority list" of 900 terms. A list of these terms will be made available to anyone who requests them at that time.

A set of numbers appears in some keyword fields. These numbers are used for tracing purposes and have no value for search analysts.

The Keyword field will only print when specifically requested.

16.3.15 TEXT WORD (TW)

The text word field consists of all the significant words or word fragments which appear in the Title (TI), Abstract (AB) or Keyword (KW) fields. These significant words are collected by a computer program which examines each alphabetic, numeric, or alphanumeric string of characters to determine if that string qualifies as a text word. The determination is based on a set of term generation rules found in Part 4.

16.4 CANCERLIT "PRINT COMMANDS

Although any data element (except Text Word) can be printed by typing "PRT and the category qualifier (e.g., "PRT SI), there are three standard "PRINT commands

in CANCERLIT. They are listed below with their abbreviations and the data elements displayed with each.

1) "PRINT or "PRT

AU - Author
TI - Title
SI - Source Identifier
SO - Source

2) "PRINT FULL or "PRT FU

AU - Author
AA - Author Address
TI - Title
SI - Source Identifier
SO - Source
LA - Language
AB - Abstract

3) "PRINT DETAILED or "PRT DL

SI - Source Identifier
AU - Author
AA - Author Address
TI - Title
ED - Entry Date
SO - Source
AB - Abstract

LA - Language
JT - Journal Title
YP - Year of Publication
IS - International Standard Serial Number
JC - Journal Coden
PT - Publication Type

All CANCERLIT "PRINT commands will display up to 25 lines plus the number of lines needed to complete the citation being printed at the 25th line.

If the "PRINT command you have specified requires printing more than 25 lines, the first 25 lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records you specified can be displayed by answering YES to each CONTINUE PRINTING? message.

Tailored "PRINT commands, including the Off-line Print Option, may be constructed to meet almost any printing requirement (see Part 4 of the Manual).

16.5 SEARCHING CANCERLIT

Because CANCERLIT is a free-text searchable data base, any significant word in the text of the title or abstract or keyword fields can be entered as a search term. These significant words are collected for each bibliographic record according to a given set of term control rules, which are listed in this section under the description of the Text Word field and described in more detail in Part 4.

The vocabulary, therefore, is not controlled as the MEDLINE vocabulary is controlled by MeSH terms. In preparing a search, an analyst should attempt to anticipate all possible ways of expressing a concept if an exhaustive retrieval of all relevant information is desired. The words an author or abstractor would have used to convey that concept must be considered, as well as any

synonyms, singular or plural forms, Latin prefixes, English spellings, or commonly used abbreviations (see Appendix 16-C), etc., which may apply. These terms would then be ORed together. For example:

- (a) MAN OR MEN OR MALE OR MALES
- (b) NEPHROBLASTOMA OR WILMS AND TUMOR
- (c) INTRAPERITONEAL OR IP
- (d) TUMOR OR TUMOUR
- (e) PATIENT OR PATIENTS OR PTS

An analyst may not need to anticipate every possible synonym when a user wants just a few articles on a given subject. Such strategy is not always necessary because exhaustive retrieval is not always necessary, but the analyst should always remember that citations will be missed when every possible way of expressing a concept is not used in the search.

It is also important to note that in the free-text system, search terms must be entered as uniterms. The computer will not recognize a multi-word concept and will respond to such an entry with a No Postings (NP) message. For example:

Incorrect Entry

SS 1 /C?
USER:
LUNG METASTASES
PROG:
NO POSTINGS (LUNG METASTASES)

Correct Entry

LUNG AND METASTASES
SQUAMOUS AND CELL AND CARCINOMA

Therefore, the two important points to remember in searching CANCERLIT are:

- (1) consider other words, synonyms, spellings, abbreviations, etc., and OR together.
- (2) only uniterms (single words) may be used in searching.

CANCERLIT
APPENDIX A

16.6 LANGUAGE ABBREVIATIONS

AFR	Afrikaans	ICE	Icelandic
ALB	Albanian	IND	Indonesian
ARA	Arabic	ITA	Italian
BUL	Bulgarian	JPN	Japanese
BUR	Burmese	KOR	Korean
CHI	Chinese	LAV	Latvian
CRO	Croatian	LIT	Lithuanian
CZE	Czech	MAY	Mayan
DAN	Danish	NOR	Norwegian
DUT	Dutch	POL	Polish
EGY	Egyptian	POR	Portuguese
ENG	English	RUM	Rumanian
EST	Estonian	RUS	Russian
FIN	Finnish	SER	Serbian
FLE	Flemish	SL0	Slovak
FRE	French	SPA	Spanish
GEO	Georgic	SWE	Swedish
GER	German	THA	Thai
GRE	Greek (Modern)	TUR	Turkish
HEB	Hebrew	UKR	Ukrainian
HUN	Hungarian	YID	Yiddish
		YUG	Yugoslavian

CANCERLIT
APPENDIX B

16.7 STOPWORD LIST

A	EVERY	NOR	THEIR
ABOUT	FOR	NOTED	THEIRS
AGAIN	FORTH	NOW	THEM
ALMOST	FROM	OF	THEN
ALREADY	GETS	OFT	THENCE
ALSO	GIVEN	OFTEN	THERE
ALTHOUGH	GIVING	ON	THEREFORE
ALWAYS	GONE	ONLY	THESE
AN	GOT	ONTO	THEY
AND	HAD	OR	THIS
ANOTHER	HAS	OUGHT	THOSE
ANYONE	HARDLY	OUR	THOUGH
ARE	HAVE	OUT	THROUGHOUT
ARISE	HAVING	OVERALL	THUS
AROSE	HENCE	PLEASE	TO
ASIDE	HERE	POSSIBLY	TOO
AWAY	HEREIN	PROBABLY	UNLESS
BECAME	HITHER	PROMPT	UNTIL
BECAUSE	HOW	PROMPTLY	UNTO
BECOME	IMMEDIATELY	PROPERLY	UPON
BECOMES	INDEED	QUICKLY	VERY
BEEN	INTO	QUITE	WAS
BEING	ITS	RATHER	WERE
BUT	ITSELF	REALLY	WHAT
BY	JUST	REGARDING	WHEN
CAME	KEEP	REGARDLESS	WHENCE
CAN	KEPT	SAID	WHERE
CANNOT	LEST	SEEN	WHEREAS
DID	MADE	SHALL	WHEREBY
DO	MERELY	SHOULD	WHICH
DOES	MIGHT	SINCE	WHILE
DOING	MOSTLY	SO	WHO
DONE	MUST	SOON	WHOM
ELSE	NEARBY	SUCH	WHOSE
ENOUGH	NEARLY	THAN	WHY
ETC	NECESSARILY	THAT	WOULD
EVER	NEXT	THE	YET

CANCERLIT
APPENDIX C

16.8 ABBREVIATIONS USED IN CANCERLIT

A	angstrom(s)	Km	Michaelis constant
ACTH	adrenocorticotrophic hormone		
ADP	adenosine diphosphate	LD	lethal dose
AMP	adenosine monophosphate	LD50	median lethal dose
ATP	adenosine triphosphate		
approx	approximately	M	molar
av	average	uM	micromolar
BCG	bacillus Calmette-Guerin	max	maximum
bid	twice daily	mEq	milliequivalent(s)
C	degree(s) centigrade	min	minute(s)
cal	calorie(s)	ml	milliliter(s)
kcal	kilocalorie(s)	uL	microliter(s)
cc	cubic centimeter(s)	mm	millimeter(s)
CI	curie(s)	mo	month(s)
mCi	millicurie(s)	mOsm	milliosmolar
uCi	microcurie(s)		
cm	centimeters	N	normal concentration
CNS	central nervous system	NAD	nicotinamide adenine dinucleotide
cpm	counts per minute	NADH	reduced nicotinamide adenine dinucleotide
DNA	deoxyribonucleic acid	NADP	nicotinamide adenine dinucleotidephosphate
ED50	median effective dose	NADPH	reduced nicotinamide adenine dinucleotidephosphate
EDTA	ethylenediamine tetraacetic acid	NCI	National Cancer Institute
g	gram(s)	NIH	National Institutes of Health
kg	kilogram(s)	PAS	periodic acid--Schiff
mg	milligram(s)	po	orally
ug	microgram(s)	ppb	parts per billion
		ppm	parts per million
hb	hemoglobin	qid	four times daily
hr	hour(s)	qod	every other day
		QO2	oxygen quotient
ia	intra-arterial		
id	intradermal	R	roentgen
ILS	increased life span	RBC	red blood cells (erythrocytes)
im	intramuscular	RNA	ribonucleic acid
ip	intraperitoneal	rpm	revolutions per minute
IU	International Unit(s)		
iv	intravenous		

sc	subcutaneous	UV	Ultraviolet
sec	second(s)	vol	volume
SGOT	serum glutamic-oxalacetic transaminase	WBC	white blood cells (leukocyte)
SGPT	serum glutamic-pyruvic transaminase	wk	week(s)
soln	solution	wt	weight
TCD		x	times
TCD50	tissue culture dose		
	median tissue culture dose		
tid	three times daily	yr	year(s)

fact*sheet

Bethesda, Maryland 20014

April 1976

CANCERPROJ

What is CANCERPROJ?

CANCERPROJ is the National Cancer Institute's on-line data base containing summaries of ongoing cancer research projects which have been provided by cancer researchers in many countries. CANCERPROJ is updated every four months and will eventually contain approximately 20,000 summaries.

How is CANCERPROJ accessed?

CANCERPROJ is accessed by a large variety of typewriter-like terminals connected to a central computer facility located at the National Library of Medicine in Bethesda, Maryland, by direct telephone line or via a nationwide network using telephone lines and small computers with access nodes located in many major cities.

How is CANCERPROJ searched?

One may retrieve summaries of research on a given subject from CANCERPROJ by entering the desired terms as they appear in the title, summary, or assigned index terms. One may also search on broad subject areas by using the subject captions assigned from the thesaurus of the Smithsonian Science Information Exchange. Terms may be entered singly or combined by means of the Boolean operators AND, OR, and AND NOT. Searches may be limited to specific investigator, fiscal year, type of award, performing organization, or country. Citations may be printed on-line at the user's terminal or printed off-line and mailed to the user from NLM. Users may select a print format varying from a brief identification of investigators, title, and performing organization to a complete listing of the entire record.

What time period is covered by CANCERPROJ?

CANCERPROJ covers cancer research in progress for the most recent three years.

Where is CANCERPROJ available?

CANCERPROJ is available at the more than 400 institutions which subscribe to any of NLM's on-line data bases.

When is CANCERPROJ available?

CANCERPROJ is available Monday, Wednesday, Thursday, and Friday from 3:00 a.m. to 5:00 p.m. and Tuesday from noon to 10:00 p.m. (Eastern Time).

Insert note in manual



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20014

February 8, 1979

NATIONAL LIBRARY OF MEDICINE

Mr. Jim Crooks
Medical Center Library
4400 Kresge Medical Research Bldg.
The University of Michigan
Ann Arbor, Michigan 48109

Dear Mr. Crooks:

Enclosed are copies of the Hierarchical and Alphabetical Listings for CANCERPROJ you requested. The Alphabetical Listing is current as of December 1978. The Hierarchical Listing is the September 1978 listing; the updated terms have been attached so you may annotate this listing. Updates to these lists are made quarterly. Since few changes are made quarterly, additions, deletions, and changes will be announced in the Technical Bulletin. Availability of new updated listings are also announced in the Technical Bulletin.

Sincerely,

Grace H. McCarn/pc
Grace H. McCarn
Acting Head, MEDLARS
Management Section

Enclosures

— Location: Reference Office copy of "On-line Services Reference Manual" v. 2 in pocket.

PART 17
CANCERPROJ

17.1 INTRODUCTION

The CANCERPROJ data base, developed by the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute (NCI), contains summaries of on-going cancer research projects which have been provided by cancer scientists in many countries. The data for the project descriptions is processed by the Current Cancer Research Projects Analysis Center (CCRESPAC) of the ICRDB Program. This center is located at the Smithsonian Science Information Exchange (SSIE) in Washington, D.C.

The data base includes projects funded during the most recent three fiscal years and currently contains approximately 15,000 summaries. These summaries include federally and privately supported grants and contracts.

CANCERPROJ is updated every three months.

All records in the data base contain English summaries and are retrievable by free-text searching, i.e., any significant word in the title, summary, or assigned index terms can be used in a search statement. Controlled vocabulary searching can also be done in CANCERPROJ using index terms from the SSIE thesaurus. It is intended that each project description will be updated once a year.

Information on file content or search strategy may be obtained by contacting the MEDLARS Management Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/496-6193; or the Data Base Coordinator, ICRDB Program, National Cancer Institute, 9000 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/427-7150.

17.2 ENTERING THE CANCERPROJ FILE

The data base can be accessed by entering ELHILL at NLM in the usual manner (see Part 3) and then typing the command "FILE CANCERPROJ after any USER: cue.

17.3 CANCERPROJ UNIT RECORD

Each CANCERPROJ unit record is the computer stored information representing one project or protocol. There are 18 data elements (fields) in the CANCERPROJ record. The table below lists those elements with their two-letter category qualifiers. The table also indicates which elements are directly searchable, which can be searched using the STRINGSEARCH capability, and which will be displayed as a result of the three standard "PRINT commands.

STRINGSEARCH and SENSEARCH in CANCERPROJ default to the Abstract (AB) field.

The CANCERPROJ Unit Record

Category Qualifier	Data Element Name	Directly Searchable	"PRINT"	"PRINT FULL"	"PRINT DETAILED"
TI	Title		X	X	X
IR	Investigators	X	X	X	X
LO	Location			X	X
AB	Abstract			X	X
SC	Subject Captions		X		X
HT	Hierarchical Terms				
BD	Begin Date				X
ND	End Date				X
FY	Fiscal Year		X		X
AN	Supporting Agency				
	ID Number	X		X	X
SA	Supporting Agency				X
AT	Type of Award	X			X
AC	SSIE Accession Number	X			X
PO	Performing Organization		X	X	X
CO	Country (or State)	X			X
HC	Hierarchical Subject Codes		X		X
ED	Entry Date	X			X
TW	Text Word	X			X

The following is a description of each of the data elements in the unit record.

17.3.1 TITLE (TI)

The title field contains the full title of the research project. It is printable but can be searched directly (as a full title) only by using the STRING-SEARCH capability. Individual words or word fragments from the title are included in the TEXT WORD field which is described below and is directly searchable.

17.3.2 INVESTIGATORS (IR)

The names of all individual participating in a given project will be included in this field. The principal investigator's name will appear first, followed by all the associate investigators. Investigators' names are directly searchable and should be entered last name first followed by a space and two initials, e.g.,

FREIREICH EJ (IR)

Individuals are not always consistent in supplying name information, so it is usually wise to perform a "NEIGHBOR command to be sure that there are no summaries in the data base in which the investigator supplied one initial only. Or, the truncation symbol (:) can be used to retrieve all articles indexed to a given investigator, whether one initial, two initials or two initials followed by JR or SR was used, e.g.

USER:
BROWN C: (IR)

PROG:
MM (BROWN C:) (5)

1 BROWN C
2 BROWN CA
3 BROWN CE
4 BROWN CI
5 BROWN CN

SPECIFY NUMBERS, ALL, OR NONE-

17.3.3 LOCATION (LO)

The location field contains the name and the complete address of the organization performing the research. In some cases, telephone numbers will also be provided in this field. The location field is not directly searchable but components of the field (Performing Organization and Country or State) can be searched directly and will be described below. Location will be displayed with the "PRINT FULL and "PRINT DETAILED commands.

17.3.4 ABSTRACT (AB)

The abstract field contains the project summary, often listed in sections called "objective", "approach" and "progress". The abstract field is printable but can be searched directly only by using the STRINGSEARCH or SENSEARCH capabilities. Individual words or word fragments are included in the Text Word (TW) field and are directly searchable.

Some records may appear to have more than one abstract. This occurs because the category qualifier prints more than one time, but all text belongs to the same record. This will be corrected shortly.

17.3.5 SUBJECT CAPTIONS (SC)

The Subject Captions field contains index terms that have been added to each project description by SSIE scientists in order to classify the description for subject retrieval. These terms are taken from the SSIE thesaurus which is hierarchical to five levels. (A complete copy of SSIE's thesaurus is not available through NLM, but the section containing cancer terms, i.e., the CANCERPROJ Index Term Listing, can be obtained at no charge by writing to the MEDLARS Management Section, NLM).

This field is directly searchable and any thesaurus term or phrase may be entered as a search term. This means that the index terms (Subject Captions) can be entered as multiterm concepts. (See Index terms portion, Part 17.4).

Subject Captions will be displayed with the "PRINT DETAILED command or by specifying "PRINT SC after any USER: cue.

For further discussion see the Index Term Section below.

17.3.6 HIERARCHICAL SUBJECT CODES (HC)

Hierarchical subject codes are numeric strings which are related to specific Subject Captions. The code can be up to five levels deep and has the format

1111.22.333.44.55, with the "1" level representing the broadest area. Following is an example of a hierarchy, listing the Subject Codes along with their Subject Captions.

0380	CANCER
0380.05	CARCINOGENESIS
0380.05.750	RADIATION CARCINOGENESIS

These codes are directly searchable by entering the numeric string followed by (HC), the category qualifier. An "explode-like" capability can be accomplished by truncating the code in the desired position and preceding the term by ALL. A listing of all codes for cancer terms is part of the CANCERPROJ Index Term Listing.

For further discussion see Index Terms section below.

17.3.7 HIERARCHICAL TERMS (HT)

The Hierarchical Terms field contains the same terms that appear in the Subject Captions field, i.e., the index terms assigned by SSIE scientists. However, along with each assigned index term, all terms above it in the hierarchy (more general terms) are automatically included as additional terms. Each term is preceded by a number which indicates its place in the hierarchy. For example:

HT - 1)CANCER; 2)CARCINOGENESIS; 3)RADIATION CARCINOGENESIS

RADIATION CARCINOGENESIS is the specific term which has been assigned, but the more general terms, CARCINOGENESIS and CANCER, have also been included.

The higher the number, the more specific the term. The highest number will always precede the assigned term.

This field prints only upon request ("PRINT HT) and is not directly searchable. Individual words are included in the TEXT WORD field and can be searched as text words.

For further discussion see the Index Terms section. p. 9.

17.3.8 BEGIN DATE (BD)

The begin date is the date the project was started or, in some cases, the date funding commenced. Its format is a two-character year followed by a two-character month. For example, 7407 would be a beginning date of July, 1974. This field is printable but can only be searched using the STRINGSEARCH capability.

17.3.9 END DATE (ND)

The end date is the date the research project's authorization expires. Projects which have been completed will be removed periodically. It is in the same format as the Begin Date, and is printable but searchable only by STRINGSEARCHing.

17.3.10 FISCAL YEAR (FY)

The fiscal year date element indicates the government fiscal year during which funds for the project have been allocated. The format is a two-character year

(e.g., 75) and the field is directly searchable.

To obtain a list of projects about radiation carcinogenesis which were funded during the 1976 fiscal year one would input:

RADIATION CARCINOGENESIS (SC) AND 76 (FY)

17.3.11 SUPPORTING AGENCY ID NUMBER (AN)

This field contains one or more numbers or alphanumeric codes of varying length by which the supporting agency identifies, manages or characterizes the project. Agency numbers are directly searchable and will be displayed with all standard "PRINT commands.

Organizations that have access to the Research Grants Index will be able to use the Project Numbers listed in the Index to search CANCERPROJ. If a cancer research project has a Project Number P02CA-08341-10 in the Index, a description of that project can be retrieved from CANCERPROJ by inputting P02 CA 08341-10 (AN).

17.3.12 SUPPORTING AGENCY (SA)

This data element contains the formal name of the agency which is managing and supporting the research project. This field is printable but can only be searched using the STRINGSEARCH capability.

NOTE: STRINGSEARCHing for phrases containing abbreviations will not work because of the period following the abbreviation.

USER:
TS (SA) :NATL. CANCER INSTITUTE:

PROG:
(64) SCHD (0) QUAL; CONT? (Y/N)
USER:
Y
PROG:
*NONE

Remember to mask the period with a # sign:

USER:
TS (SA) :NATL# CANCER INSTITUTE
PROG:
(56) SCHD (24) QUAL: CONT? (Y/N)
USER:
Y
SS (3) PSTG (37)

17.3.13 TYPE OF AWARD (AT)

A single letter code is present in this field to indicate the nature of the award. A grant contains a "G" in this field; a contract contains "C", and a fellowship contains "F". This field is directly searchable. For example, in searching for grants research of breast cancer:

BREAST CANCER (SC) AND G (AT)

17.3.14 SSIE ACCESSION NUMBER (AC)

The SSIE Accession Number is the unique machine-readable tag by which SSIE identifies the research project. The first part of the tag is constant but the rightmost numbers (continuation numbers) represent yearly or sub-yearly editions of the record. In general, the continuation number tends to change for each fiscal year period of the project. This data element is printable and searchable.

17.3.15 PERFORMING ORGANIZATION (PO)

This field contains the name of the organization performing the research. It is directly searchable and organization names (up to 30 characters) can be entered as search terms. The complete name of the organization can be entered, e.g.,

ALBERT EINSTEIN MEDICAL CENTER (PO)

When searching this data element it would be wise to perform a "NEIGHBOR" command as there may be cases in which abbreviations had to be used because the organization name exceeded 30 characters.

However, any specific organization name will always appear in the same format. For example, if you "NEIGHBOR" and find that the word Association is abbreviated in a given organization name, Association will always be abbreviated in that organization name and the abbreviation will be Assn., as listed in the Appendix. Another organization name may not have the word Association abbreviated so whenever you search for that organization, you should not abbreviate Association. (See the Appendix for a listing of the standard abbreviations used in this data element.)

17.3.16 COUNTRY (OR STATE) (CO)

This data element contains the name of the country or state where the research project is being performed. If the research is taking place in the United States, the name of the state itself will be indicated instead of 'United States'. The field is directly searchable and is entered as the unabbreviated name.

17.3.17 ENTRY DATE (ED)

The Entry Date is the year and month that this project description was entered into the National Library of Medicine's computer system. It is directly searchable and appears in the format YYMM. All project descriptions added to the system in February 1977 can be retrieved by entering 702 (ED).

This data element can also be searched by ranging (see Part 3 for details on Ranging).

7.3.18 TEXT WORD (TW)

The text word field consists of all the significant words or word fragments which appear in the Title (TI), Abstract (AB), and Hierarchical Term (HT)

data elements. These significant words are collected by a computer program which examines each alphabetic, numeric, or alphanumeric string of characters to determine if that string qualifies as a text word. The determination is based on a set of term generation rules described in Part 4.

17.4 INDEX TERMS

The three data elements discussed above (Subject Captions, Hierarchical Subject Codes and Hierarchical Terms) all contain information related to index terms. It is important to remember that for any given record there is only one set of assigned index terms: those terms found in the Subject Captions field (SC). The numeric code for each assigned index term appears in the Hierarchical Subject Codes (HC) field. The assigned index term's placement in the hierarchy and all the terms above it are what are found in the Hierarchical Terms (HT) field. Following is the content of the three data elements for one record in CANCERPROJ.

SC - LEUKEMIA
SC - HODGKINS -NONSPECIFIC
SC - HEMORRHAGE
SC - GENERAL IMMUNOSUPPRESSION
SC - INTRACELLULAR KILL,INACTIVAT.
SC - INFECTIOUS DISEASE -GENERAL
SC - INTRACELLULAR SITE
SC - PHAGOCYTIC CELL OF ALVEOLUS
SC - PULMONARY ALVEOLAR PROTEINOSIS
SC - RESPIRATORY DISEASE -GENERAL
SC - STRUCTURAL FUNCTIONS
SC - RESPIRATORY BACTERIA
SC - FUNGI -OTHER
SC - HOMO SAPIENS - MODERN
SC - HERP HOMINIS-SIMPLEX -NONSPEC

HC - 0381.37.020
HC - 0381.50.056.25.997
HC - 0390.50.300
HC - 0474.80.500
HC - 0480.25.200
HC - 0480.30.997
HC - 0480.50.500
HC - 0581.05.700.10
HC - 0581.30.725
HC - 0581.30.997
HC - 0615.60.900
HC - 0705.10.981
HC - 0705.31.995
HC - 0759.10
HC - 0761.11.500.40.397

HT - 1) CANCER - BODY SITES; 2) BLOOD CANCERS; 3) LEUKEMIA; 2)
LYMPHATIC SYSTEM NEOPLASMS; 3) LYMPH NODE LYMPHOSARC,LYMPHOMA; 4)
HODGKINS DISEASE, LYMPHOMA; 5) HODGKINS -NONSPECIFIC
HT - 1) CARDIOVASCULAR SYSTEM; 2) VASCULAR PATHOLOGY, OTHER; 3)
HEMORRHAGE
HT - 1) IMMUNITY; 2) IMMUNOSUPPRESSION; 3) GENERAL IMMUNOSUPPRESSION

HT - 1) MED & VETERINARY MICROBIOLOGY; 2) HOST SUSCEPTIBILITY, RESISTANCE; 3) INTRACELLULAR KILL, INACTIVAT.; 2) INFECTIOUS DISEASE - CONDITION; 3) INFECTIOUS DISEASE - GENERAL; 2) MULTIPLICATION SITE; 3) INTRACELLULAR SITE

HT - 1) RESPIRATORY SYSTEM; 2) FUNCTION, BIOCHEMISTRY; 3) PULMONARY ALVEOLAR CELLS; 4) PHAGOCYTIC CELL OF ALVEOLUS; 2) DISEASES AND CONDITIONS; 3) PULMONARY ALVEOLAR PROTEINOSIS; 3) RESPIRATORY DISEASE - GENERAL

HT - 1) CELLULAR PHYSIOLOGY; 2) METABOLISM, INTRACELLULAR; 3) STRUCTURAL FUNCTIONS

HT - 1) ORGANISMS; 2) BACTERIA; 3) RESPIRATORY BACTERIA; 2) FUNGI; 3) FUNGI - OTHER

HT - 1) TEST ANIMALS, HUMAN; 2) HOMO SAPIENS - MODERN

HT - 1) VIRUSES, ANIMAL; 2) DNA VIRUSES, ENVELOPED; 3) HERPESVIRUS GROUP; 4) GROUP A HERPESVIRUSES; 5) HERP HOMINIS-SIMPLEX - NONSPEC

Therefore, subject searching can be accomplished in three different ways:

- 1) Controlled vocabulary searching by direct entry of Subject Captions (SC):

SS 1 /C?
USER:
RADIATION CARCINOGENESIS (SC)

PROG:
SS (1) PSTG (240)

- 2) Controlled vocabulary searching by direct entry of Hierarchical Subject Codes (HC):

SS 2 /C?
USER:
0380.05.750

PROG:
SS (2) PSTG (240)

- 3) Free-text searching by Text word (TW) entry of individual words from the Hierarchical Terms field:

SS 1 /C?
USER:
RADIATION (TW) AND CARCINOGENESIS (TW)

PROG:
SS (1) PSTG (421)*

*It should be remembered that although the words RADIATION CARCINOGENESIS can be searched in three ways, the entry RADIATION (TW) AND CARCINOGENESIS (TW) will retrieve the most postings because the Text Word field contains words not only from the Hierarchical Terms and Subject Captions fields, but from the Title and Abstract fields as well.

There is no default for index terms, so an unqualified term will generate a Multi-Meaning message if it is both a Subject Caption and a Text Word.

One final point: Because CANCERPROJ is a small data base, a term may occasionally be entered which has not yet been used as an index point. You will, therefore, get a NP (No Postings) message after entering that Subject Caption.

17.5 CANCERPROJ "PRINT COMMANDS

There are three standard "PRINT commands in CANCERPROJ. They are listed below with their abbreviations and the data elements displayed with each.

1) "PRINT or "PRT

TI - Title
IR - Investigators
PO - Performing Organization

2) "PRINT FULL or "PRT FU

TI - Title
IR - Investigators
LO - Location
AB - Abstract
AN - Supporting Agency ID Number

3) "PRINT DETAILED or "PRT DL

TI - Title
IR - Investigators
LO - Location
AB - Abstract
BD - Begin Date
ND - End Date
FY - Fiscal Year
AN - Supporting Agency ID Number

SA - Supporting Agency
AT - Type of Award
AC - SSIE Accession Number
PO - Performing Organization
CO - Country (or State)
SC - Subject Captions
HC - Hierarchical Subject Codes
ED - Entry Date

All CANCERPROJ "PRINT commands will display up to 25 lines plus the number of lines needed to complete the record being printed at the 25th line.

If the "PRINT command specified requires printing more than 25 lines, the first 25 lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified can be displayed by answering YES to each CONTINUE PRINTING? message.

Tailored "PRINT commands, including the Off-line Print Option, may be constructed to meet almost any printing requirement (see Part 3).

CANCERPROJ
APPENDIX

17.6 ABBREVIATIONS USED IN THE PERFORMING ORGANIZATION (PO) DATA ELEMENT

The Name and Unit abbreviations are each limited to 30 characters. The following words are frequently abbreviated as shown, especially when they appear as the first word of a name:

Academy	ACAD.	Institute	INST.
Administration	ADMIN.	Institution(al)	"
Agricultural	AGRIC.	Intergovernment(al)	INTERGOV.
American	AMER.	Interdepartment(al)	INTERDEPT.
Associates(d)	ASSOC.	International	INTERNAT.
Association	ASSN.	Interprofessional	INTERPROF.
California	CALIF.	Laboratory	LAB.
College	COLL.	Limited	LTD.
Commission	COMM.	Massachusetts	MASS.
Committee	"	Metropolitan	METROP.
Commonwealth	"	National	NATL.
Community	"	Office	OFF.
Company	CO.	Oklahoma	OKLA.
Conference	CONF.	Organization	ORG.
Connecticut	CONN.	Pennsylvania	PENN.
Cooperative	COOP.	Philadelphia	PHILA.
Coordinated(ing)	COORD.	Project	PROJ.
Corporation	CORP.	Research	RES.
Department	DEPT.	San Francisco	SAN FRAN.
District	DIST.	Section	SECT.
Division	DIV.	Society	SOC.
Education(al)	EDUC.	Union of Soviet Soc. Republics	U.S.S.R.
Federal	FED.	University(ies & al)	UNIV.
Federation	"	United States	U.S.
Foundation	FOUND.	Wisconsin	WISC.

PART 18 CLINPROT

18.1 INTRODUCTION

The CLINPROT data base, developed by the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, contains approximately 1,000 summaries of clinical investigations of new anticancer agents and treatment modalities. Most of the protocol descriptions have been provided to the ICRDB Program by the Division of Cancer Treatment (DCT) of the National Cancer Institute. Several hundred have also been supplied by major U.S. cancer centers and by sources outside the United States. The summaries are prepared for data base input by the Smithsonian Science Information Exchange (SSIE).

The file provides descriptions of clinical trials, including patient entry criteria, the therapy regimen, and special study parameters.

CLINPROT is a small, highly specialized file primarily designed for clinical oncologists who are actively engaged in the development and testing of clinical protocols. However, it will also be useful to other clinicians who wish to learn about new cancer treatment methods currently being evaluated in controlled clinical trials.

All records in the data base are retrievable by "free-text" searching, i.e., any significant word in the title, summary, or assigned index terms can be used in a search statement.

In addition, a special list of approximately 300 clinical protocol terms is used to index the CLINPROT records and these terms can be used for controlled term searching.

After a six-month experimental period, it is anticipated that CLINPROT will be updated every four months.

Information on file content or search strategy may be obtained by contacting the MEDLARS Management Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014, phone: 301/496-6193; or the Data Base Coordinator, ICRDB Program, National Cancer Institute, 9000 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/427-7150.

18.2 ENTERING THE CLINPROT FILE

The data base can be accessed by entering ELHILL at NLM in the usual manner (see PART 4) and then typing the command "FILE CLINPROT after any USER: cue.

18.3 CLINPROT UNIT RECORD

The CLINPROT unit record is the computer-stored information representing one

protocol summary. There are 21 data elements (fields) in CLINPROT for each record. The table below lists those elements with their two-letter category qualifiers. The table also indicates which elements are directly searchable and which will be displayed as a result of the three standard "PRINT commands.

<u>CATEGORY NAME</u>	<u>CATEGORY QUALIFIER</u>	<u>DIRECTLY SEARCHABLE</u>	<u>"PRINT</u>	<u>"PRINT FULL</u>	<u>"PRINT DETAILED</u>
ID Number	ID	X	X	X	X
Investigators	IR	X		X	X
Title	TI		X	X	X
Location	LO		X	X	X
Stratification Points	SP	X			X
Protocol Phase	PH	X			X
Abstract	AB			X	X
Supporting Agency	SA			X	X
Begin Date	BD				X
End Date	ND				X
Fiscal Year	FY	X			X
Type of Award	AT	X			X
SSIE Accession Number	AC	X			X
Performing Organization	PO	X			X
Country (or State)	CO	X			X
Entry Date	ED	X			X
Subject Captions	SC	X			X
Hierarchical Subject Codes	HC	X			X
Hierarchical Terms	HT				
Correction Date	CD	X			X
Text Words	TW	X			

The following is a description of the data elements in the unit record.

18.3.1 ID NUMBER (ID)

The identification number field contains one or more unique numbers. There are currently three different numbers which may appear: (1) A protocol number that has an alphabetic prefix (which identifies the group performing the study) followed by a hyphen and numerics, e.g. SWOG-1234 identifies the protocol as one being studied by the Southwest Oncology Group, (2) The contract or grant number and (3) the Clinical Trial Inventory Number which is usually a seven digit numeric preceded by three alphabetic characters. See Appendix D for acronyms used to identify various study groups.

If an ID Number has an A or B as the last character, the protocol has been segmented into two parts. A record retrieved with an ID Number GOG-26A indicates that the original protocol was segmented; entering GOG-26B will retrieve the other part.

An identification number containing a slash followed by numerics indicates that two protocol summaries have been combined. For example, SWOG-7204/7205 identifies the retrieved record as being the combination of two protocol summaries; SWOG-7204 and SWOG-7205.

This data element is directly searchable but is intended only for use by administrative individuals with access to identification numbers for specific clinical protocols.

18.3.2 INVESTIGATORS (IR)

This field contains the name of the group chairman (for cooperative group protocols) or the name of the study chairman (for contract or core grant protocols), or if these are not given the name of the principal investigator. The name is directly searchable and is entered last name first followed by a space and two initials, e.g., DURANT JR (IR).

18.3.3 TITLE (TI)

The Title field contains the protocol study phase, the therapy modality, the drug combinations and the type and site of the tumor. Drug combinations are expressed in one of three ways: by key drug names, by abbreviations alone or by a drug combination acronym followed in parentheses by the abbreviations for the individual drug names, such as CMF (CTX/MTX/5-FU). CMF is a drug combination acronym indicating a therapy regimen consisting of a combination of cyclophosphamide, methotrexate and 5-fluorouracil. (See Appendix A for a list of frequently used drug combination acronyms and the drugs they include.)

This field is not directly searchable. Individual word or word fragments from the title are included in the Text Word field which is described below and which is directly searchable.

18.3.4 LOCATION (LO)

The Location field gives the name and complete address of the Cooperative Group or the Contract Group or the Cancer Center (whichever is appropriate) coordinating the study. The Location field is not directly searchable but components of the field (Performing Organization and Country - State) can be searched directly and will be described below.

18.3.5 STRATIFICATION POINTS (SP)

This data element is directly searchable and contains special terms describing the parameters for stratification, i.e. the criteria specified for determining whether or not a patient can be entered into the study. (See Appendix B for list of terms currently in use.) If a clinician were interested in protocols in which only patients of a specific age were included in the study, one would enter AGE (SP). To retrieve records involving specific age groups, one would have to free-text search or STRINGSEARCH.

More than one term may appear in this field but any one term from the list will retrieve a record. It is likely that more terms will be added to the current list of Stratification Points.

18.3.6 PROTOCOL PHASE (PH)

The Protocol Phase can be entered as a direct search query and is given as one of the following:

- a. PHASE I
- b. PHASE II
- c. PHASE III
- d. PHASE IV
- e. ADJUVANT

- . Phase I studies attempt to define an agent's limiting toxicities, time courses, dose response relationships, etc.
- . Phase II studies are primarily designed to determine the types of tumors which do or do not respond.
- . Phase III studies must establish the efficacy of a drug as a meaningful treatment.

d. Phase IV studies develop the use of a drug in combination with other therapies.

e. Adjuvant studies.

To retrieve Phase III studies, enter:

PHASE III (PH)

PLEASE NOTE: Many protocol summaries do not contain an indication of the study phase because that information was not supplied.

18.3.7 ABSTRACT (AB)

The Abstract field contains the protocol summary subdivided into the following paragraphs:

- a. Objective
- b. Protocol Entry Criteria
- c. Protocol Outline
- d. Stratification Points
- e. Special Study Parameters
- f. End points
- g. Current Status
- h. Dosage Schedule
- i. Dosage Forms
- j. Addenda

Specific phrases in the Abstract field can be searched directly only by using the STRINGSEARCH or SENSEARCH capabilities. Individual words or word fragments are directly searchable as Text Words.

18.3.8 SUPPORTING AGENCY (SA)

This field contains the formal name of the agency which is supporting the clinical study. The Supporting Agency for all U.S. protocol summaries is: U.S. Department of Health Education and Welfare; Public Health Service; National Institutes of Health; National Cancer Institute. Supporting Agencies for foreign protocols will vary.

NEWS 05/15/78 : ONLY THE PROTOCOL ENTRY CRITERIA AND THE PROTOCOL OUTLINE WILL BE PRINTED IN THE ABSTRACT FIELD. ALL OTHER DATA PREVIOUSLY FOUND IN THE ABSTRACT FIELD HAVE NOW BEEN PLACED IN A NEW FIELD CALLED PROTOCOL DETAILS (PD). THE PROTOCOL DETAIL FIELD WILL PRINT UPON REQUEST AND ALSO AS PART OF THE PRINT DETAILED FORMAT.

This field is not directly searchable but can be searched using the STRING-SEARCH capability.

18.3.9 BEGIN DATE (BD)

The Begin Date is the month and year the protocol was activated (by the entry of the first patient). The field is in the format YYMM, e.g., 7707.

18.3.10 END DATE (ND)

The End Date is the month and year the last patient was admitted into the study or that the study was closed to further patient entry. This field is in the format YYMM.

18.3.11 FISCAL YEAR (FY)

This field contains date the protocol was registered and prepared for the data base. Fiscal Year will be removed when CLINPROT is rebuilt.

18.3.12 TYPE OF AWARD (AT)

The Type of Award field indicates the funding mechanism for the protocol. This field will also be removed when CLINPROT is rebuilt.

18.3.13 SSIE ACCESSION NUMBER (AC)

The SSIE Accession Number is the unique machine-readable tag by which SSIE identifies the protocol summary. It is the best number to use when a unique number is required to identify a document for later retrieval from the data base.

The Accession Number is directly searchable and for protocols is always ZZ followed by three spaces and four numerics, e.g., ZZ 1234.

18.3.14 PERFORMING ORGANIZATION (PO)

This data element contains the name (up to 30 characters) of the cooperative group or cancer center using the protocol. Because of the character limitation, names may contain abbreviations. However, any given location will always be written the same way whenever it appears.

Performing organization names can be entered as direct search queries but it will often be necessary to first do a "NEIGHBOR XXXXX (PO) to be sure of the format for entering a specific name.

The organizations currently contributing summaries to this data base are identified in the list of special clinical protocol index terms (see Subject Captions for further discussion).

18.3.15 COUNTRY (OR STATE) (CO)

This field contains the names of the country where the protocol study is taking place. Protocol studies in the United States can be retrieved by entering USA or by entering a specific state name.

The field is directly searchable and all the following are examples of valid entries:

NEW YORK (CO)
FRANCE (CO)
USA (CO)

18.3.16 ENTRY DATE (ED)

The Entry Date is the year and month that the protocol was entered into the National Library of Medicine's computer system. It is directly searchable and appears in the format YYMM. All protocols which were part of the original CLINPROT file carry an entry date of 7703, for March 1977.

18.3.17 SUBJECT CAPTIONS (SC)

The Subject Captions field for a given record contains all the special clinical protocol index terms used to index that protocol summary. The terms are selected from the list of 300 special indexing terms mentioned earlier.

Because these terms are EXTRACTED (from the Hierarchical Terms field) and any of special index terms can be retrieved by free-text searching, the list has not been provided with this manual. (Copies of the list can be obtained at no charge by writing to MEDLARS Management Section, NLM and requesting the CLINPROT Index Term List.)

This field is directly searchable. Any term appearing on the index term list can be entered as a search term, e.g., IMPLANTATION RADIOTHERAPY (SC).

18.3.18 HIERARCHICAL SUBJECT CODES (HC)

Hierarchical Subject Codes are numeric strings related to each specific Subject Caption. The longer the numeric string, the more specific the index term.

0780.15	THERAPY MODALITIES
0780.15.030	IMMUNOTHERAPY
0780.15.030.15	ANTIBODY PASSIVE TRANSFER

The above is an example of a hierarchy illustrating the code for each Subject Caption.

These codes are directly searchable by entering the numeric strings as they appear above. e.g.,

0780.15.030 (HC)

This field is an additional way of searching index terms. Truncating codes provides a way of getting, for example, all types of therapy modalities without having to type in each specific term:

SS 1/C? ALL 0780.15: (HC)

18.3.19 HIERARCHICAL TERMS (HT)

This field contains the specific index terms (Subject Captions) assigned by indexers to the protocol, as well as all the index terms which appear above the particular term in the hierarchy. Each term is preceded by a number which indicates its place in the hierarchy. For example:

HT - 1) CLINICAL PROTOCOLS; 2) THERAPY MODALITIES; 3) IMMUNOTHERAPY

IMMUNOTHERAPY is the specific term which was assigned to the protocol and the more general terms, THERAPY MODALITIES and CLINICAL PROTOCOLS have also been added. The higher the number, the more specific the term. The highest number will always precede the assigned index term.

Printing the HT field permits a search analyst to see the broader terms above every index term that the indexers assigned to the protocol summary.

This field is not directly searchable and prints only upon request, by typing "PRINT HT. Individual words can be searched directly as Text Words (TW).

18.3.20 CORRECTION DATE (CD)

This data element, when it contains information, indicates the last date when a significant revision was made to the protocol summary. The data element is not changed when minor editorial corrections are made or when the format of the summary is altered.

The revisions are usually amendments and addenda to the procedures or a change in the operational status of the protocol, as reported by the group chairman.

Correction Date is directly searchable and is entered in the format YYMM.

18.3.21 TEXT WORD (TW)

Please see Appendix C for words which are always abbreviated.

The text word field consists of all the significant words or word fragments which appear in the Title (TI), Abstract (AB) or Hierarchical Terms (HT) fields. These significant words are collected by a computer program which examines each alphabetic, numeric, or alphanumeric string of characters to determine if that string qualifies as a Text Word. The determination is based on a set of term generation rules which are discussed in Part 4 of this Manual.

18.4 CLINPROT "PRINT COMMANDS

Although any data element (except Text Word) can be printed by typing "PRT and the category qualifier (e.g., "PRT SI), there are three standard "PRINT commands in CLINPROT. They are listed below with their abbreviations and the data elements displayed with each.

1) "PRINT or "PRT

ID - ID Number
TI - Title
LO - Location

2) "PRINT FULL or "PRT FU

ID - ID Number
IR - Investigators
TI - Title
LO - Location
AB - Abstract
SA - Supporting Agency

3) "PRINT DETAILED or "PRT DL

ID - ID Number
IR - Investigators
TI - Title
LO - Location
SP - Stratification Points
PH - Protocol Phase
AB - Abstract
SA - Supporting Agency
BD - Begin Date
ND - End Date
FY - Fiscal Year
AT - Type of Award
AC - SSIE Accession Number
PO - Performing Organization
CO - Country (or State)
ED - Entry Date
SC - Subject Captions
HC - Hierarchical Subject Codes
CD - Correction Date

ALL CLINPROT "PRINT commands will display up to 25 lines plus the number of lines needed to complete the citation being printed at the 25th line.

If the "PRINT command you have specified required printing more than 25 lines,

the first 25 lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records you specified can be displayed by answering YES to each CONTINUE PRINTING? message.

Tailored "PRINT commands, including the off-line print option, may be constructed to meet almost any printing requirement (see PART 4 of the Manual).

APPENDIX A

18.5 DRUG COMBINATION ACRONYMS

ABC	Adriamycin, BCNU, Cyclophosphamide
ABV	Actinomycin-D, Bleomycin, Vincristine
ABVD	Adriamycin, Bleomycin, Vincristine, DTIC
ACID	Adriamycin, Cyclophosphamide, ETIC, Actinomycin-D
ACOAP	Adriamycin, Cyclophosphamide, Vincristine, Cytosine Arabinoside, Prednisone
ACOPP	Adriamycin, Cyclophosphamide, Vincristine, Prednisone, Procarbazine
AD	Cytosine Arabinoside, Daunomycin
ADCONFU	Adriamycin, Cyclophosphamide, Vincristine, 5-Fluorouracil
ALOMAD	Adriamycin, Chlorambucil, Vincristine, Methotrexate, Actinomycin I, DTIC
AT	Cytosine arabinoside, Thioguanine
AV	Adriamycin, Vincristine
M-BACOD	Methotrexate/Citrovorum Factor, Bleomycin, Adriamycin, Cyclophosphamide, Vincristine, Dexamethasone
BACON	Bleomycin, Adriamycin, CCNU, Vincristine, Nitrogen Mustard
BACOP	Bleomycin, Adriamycin, Cyclophosphamide, Vincristine, Prednisone
BAMON	Bleomycin, Adriamycin, Methotrexate, Vincristine, Nitrogen Mustard
BAVIP	Bleomycin, ETIC, Vincristine, Adriamycin, Prednisone
BCOP	BCNU, Cyclophosphamide, Vincristine, Prednisone (not identical to BCVP)
BCVP	BCNU, Cyclophosphamide, Vincristine, Prednisone (not identical to BCOP)
BCVPP	BCNU, Cyclophosphamide, Vinblastine, Prednisone, Procarbazine

BDOPA	Bleomycin, DTIC, Vincristine, Prednisone, Adriamycin
BHD	BCNU, Hydroxyurea, DTIC
BHD-V	BCNU, Hydroxyurea, DTIC, Vincristine
BIKE	Phase 1: Prednisone, Vincristine Phase 2: Methotrexate followed by 6-MP, later followed by Cyclophosphamide
BMP	BCNU, Methotrexate, Procarbazine
BOMB	Vincristine, Adriamycin, 6-Mercaptopurine, Prednisone
CA-BOP	Cyclophosphamide, Adriamycin, Bleomycin, Vincristine, Prednisone
CAD	Cytosine Arabinoside, Daunomycin
CAF	Cyclophosphamide, Adriamycin, 5-Fluorouracil (not identical to FAC)
CAFVP	Cyclophosphamide, Adriamycin, 5-Fluorouracil, Vincristine, Prednisone
CAM	Cyclophosphamide, Adriamycin, Methotrexate
CAMP	Cyclophosphamide, Adriamycin, Methotrexate, Procarbazine
CAP	Cyclophosphamide, Adriamycin, Prednisone
CAT	Cytosine Arabinoside, Thioguanine
CAVE	CCNU, Adriamycin, Vinblastine
CAVP	Cyclophosphamide, Adriamycin VM-26, Prednisone
CCM	Cyclophosphamide, CCNU, Methotrexate
CCNU-OP	CCNU, Vincristine, Prednisone
CHO	Cyclophosphamide, Adriamycin, Vincristine
CHOB	Cyclophosphamide, Adriamycin Vincristine, Bleomycin
CHOP	Cyclophosphamide, Adriamycin, Vincristine, Prednisone
CHOPBLEO	CHOP given with Bleomycin
CHOR	Cyclophosphamide, Vincristine, Adriamycin (plus Radiotherapy)
CHVP	Adriamycin, VM-26, Cyclophosphamide, Prednisone

CMF	Cyclophosphamide, Methotrexate, 5-Fluorouracil
CMFH	Cyclophosphamide, 5-Flourouracil, Hydroxyurea
CMFV	Cyclophosphamide, Methotrexate, 5-Fluorouracil, Vincristine
COAP	Cyclophosphamide, Vincristine, Cytosine Arabinoside, Prednisone (not identical to COPA)
COM	Cyclophosphamide, Vincristine, MeCCNU
COMB	Cyclophosphamide, Vincristine, MeCCNU, Bleomycin
COMF	Cyclophosphamide, Vincristine, Methotrexate, 5-Fluorouracil
CONPADRI-I	Cyclophosphamide, Vincristine, Melphalan, Adriamycin
COP	Cyclophosphamide, Vincristine, Prednisone or Prednisolone (not identical to CVP)
COPA	Cyclophosphamide, Adriamycin, Vincristine, Prednisone (not identical to COAP)
COPB	Cyclophosphamide, Vincristine, Prednisone, Bleomycin (not identical to CPOB)
COPP	Cyclophosphamide, Vincristine, Procarbazine, Prednisone
CP	Cyclophosphamide, Prednisone
CPOB	Cyclophosphamide, Prednisone, Vincristine, Bleomycin (not identical to COPB)
CVA	Cyclophosphamide, Vincristine, Adriamycin
CVM	Cyclophosphamide, Vincristine, Methotrexate
CVP	Cyclophosphamide, Vincristine, Prednisone or Prednisolone (not identical to COP)
CY-VA-DACT	Cyclophosphamide, Vincristine, Adriamycin, Actinomycin-D
CY-VA-DIC	Cyclophosphamide, Vincristine, Adriamycin, ETIC
DA	Daunomycin, Cytosine arabinoside
DBH	DTIC, BCNU, Hydroxyurea
DBV	DTIC, BCNU, Vincristine

DCCMP	Daunomycin, Cyclocytidine, 6-Mercaptopurine, Prednisolone
DCMP	Daunomycin, Cytosine Arabinoside, 6-Mercaptopurine, Prednisolone
DCV	DTIC, CCNU, Vincristine
DZAPO	Cytosine Arabinoside, Azacytidine, Prednisone, Vincristine, Daunomycin
FAC	5-Fluorouracil, Adriamycin, Cyclophosphamide (not identical to CAF)
FAC-BCG	Florafur, Adriamycin, Cyclophosphamide, BCG
FAM	5-Fluorouracil, Adriamycin, Mitomycin C
FAME	5-Fluorouracil, Adriamycin, MeCCNU
FEMED	5-Fluorouracil, Methotrexate, Cyclophosphamide, Prednisone
FIME	5-Fluorouracil, ICRF-159, MeCCNU
FTOR-MIM-BCG	Florafur/Adriamycin/Cyclophosphamide/BCG
FUM	5-Fluorouracil, Methotrexate
HDCCAMS	High Dose Cyclophosphamide, Adriamycin
IMV	Isophosphamide, Vincristine, Methotrexate
LAPOCA	L-Asparaginase, Prednisone, Vincristine, Cytosine arabinoside, Adriamycin
LSA1	Cyclophosphamide plus Radiotherapy (plus consolidation)
LSA212	Cyclophosphamide plus Radiotherapy (plus consolidation)
MAD	MeCCNU, Adriamycin
MACC	Methotrexate, Adriamycin, Cyclophosphamide, CCNU
MCBP	Melphalan, Cyclophosphamide, BCNU, Prednisone
MCP	Melphalan, Cyclophosphamide, Prednisone
MF	Mitomycin, 5-Fluorouracil
MOB	Nitrogen Mustard, Vincristine, Bleomycin
MOP	Nitrogen Mustard, Vincristine, Procarbazine

MOPP	Nitrogen Mustard, Vincristine, Procarbazine, Prednisone
MVPP	Nitrogen Mustard, Vinblastine, Procarbazine, Prednisone
N3	Cyclophosphamide, Vincristine, Trifluorothymidine, Papaverine
NAC	Nitrogen Mustard, Adriamycin, CCNU
OAP	Vincristine, Cytosine Arabinoside, Prednisone
OPAL	Vincristine, Adriamycin, L-Asparaginase
PEP	Cyclophosphamide, VM-26, Prednisolone
PATCO	Prednisone, Vincristine, Thioguanine, Cytosine arabinoside, Cyclophosphamide
PIP	6-Mercaptopurine, Vincristine, Methotrexate, Citrovorum Factor
POCA	Adriamycin, Prednisone, Cytosine arabinoside, Vincristine
POMP	6-Mercaptopurine, Vincristine, Methotrexate and either Prednisone or Prednisolone
ROAP	Rubidazole, Vincristine, Cytosine arabinoside, Prednisone
RUBIDIC	Rubidazole, DTIC
SLA2-L2	Cyclophosphamide, Vincristine, Methotrexate, Daunomycin, Prednisone and Consolidation and Maintenance
SMF	Streptozotocin, Mitomycin C, 5-Fluorouracil
TAD	Thioguanine, Cytosine Arabinoside, Daunomycin
VAB	Vinblastine, Actinomycin D, Bleomycin
VAB III	Vinblastine, Actinomycin D, Bleomycin, cis-Platinum, Cyclophosphamide, Chlorambucil
VAC	Vincristine, Actinomycin D, Cyclophosphamide
VACAR	Vincristine, Adriamycin, Cyclophosphamide, Actinomycin D
VADA	Vincristine, Adriamycin, Cytosine Arabinoside, Dexamethasone
VAMP	Vincristine, Methotrexate, 6-Mercaptopurine, Prednisone
VAT-D	Vincristine, Cytosine arabinoside, Thioguanine, Daunomycin

VAV	VP-16, Adriamycin, Vincristine
VBAP	Vincristine, BCNU, Adriamycin, Prednisone
VCAP	Vincristine, Cyclophosphamide, Adriamycin, Prednisone
VCMP or VMCP	Vincristine, Melphalan, Cyclophosphamide, Prednisone
VCP	Cyclophosphamide/Vincristine/Prednisone
VLP	Vincristine, L-Asparaginase, Prednisone
VP	Vincristine, Prednisone
VPCM	Vincristine, Prednisone, Cyclophosphamide, Methotrexate, 5-Fluorouracil

APPENDIX B

18.6 STRATIFICATION POINTS

AGE
SEX
BLOOD COUNTS
PROGNOSTIC RISK
IMMUNE STATUS
CARDIAC STATUS
BONE MARROW STATUS
CNS INVOLVEMENT
DISEASE STAGE
ESTROGEN LEVELS
ENDOCRINE STATUS
HEPATIC INVOLVEMENT
HISTOLOGIC GRADE
MENOPAUSAL STATUS
MORPHOLOGIC SUBTYPES
NODAL STATUS
PARTICIPATING INSTITUTIONS
PERFORMANCE STATUS
PRIOR CHEMOTHERAPY
PRIOR RADIOTHERAPY
PRIOR THERAPY - UNSPECIFIED
PRIOR SURGERY
EXTENT OF TUMOR
SITE OF PRIMARY TUMOR
SITE OF METASTASE
EXTENT OF METASTASES
DRUG TOLERANCE
STRATIFICATION -OT
STRATIFICATION -GEN

* Terms must be entered exactly as they appear in this list.

APPENDIX C

18.7 ABBREVIATIONS USED IN CLINICAL PROTOCOL SUMMARIES

as tolerated	prn	National Cancer Institute	NCI
bacillus Calmette Guerin	BCG	National INstitutes of Health	NIH
Brain Tumor Chemotherapy	BTSG	normal (conc.)	N
Study Group		orally	po
Central Nervous System	CNS	oxygen quotient	QO2
Central Oncology Group	COG	parts per million	ppm
Children's Cancer Study	CCG	Public Health Service	PHS
Group A		radiation absorbed dose	rad
Cooperative Breast Cancer	CBCG	Radiation Therapy Oncology	RTOG
Group		Group	
cubic	cu	Radiotherapy Hodgkin's	RHDG
curie(s)	Ci	Disease Group	
deoxyribonucleic acid	DNA	red blood cells (erythrocytes)	RBC
department	dept	ribonucleic acid	RNA
Department of Health, Education and Welfare	DHEW	roentgen	R
Eastern Cooperative Oncology	ECOG	second	2nd
Group		Southeastern Cancer Study	SEG
every	EST	Group	
fifth	q	Southwest Oncology Group	SWOG
first	5th	square	sq
fourth	1st	subcutaneous	sc
gram	4th	third	3rd
Gynecologic Oncology Group	g	versus	vs
hemoglobin	GOG	Veterans Administration	VASAG
International Unit(s)	Hgb	Surgical Adjuvant Cancer	
intradermal	IU	Chemotherapy Study Group	
intramuscular	id	white blood cells (leukocytes)	WBC
intraperitoneal	im	Western Cancer Study Group	WCG
intravenous	ip		
intravenous pyelogram	iv		
kilogram(s)	IVP		
methanol extraction	kg		
residue of BCG	MER		
meter(s)	m		
microgram	ug		
millicurie(s)	mCi		
milliequivalents	mEq		
milligram	mg		
milliliter	ml		
millimeter	mm		
millimolar	mM		
milliunits(s)	mU		

APPENDIX D

18.8 STUDY GROUP ACRONYMS

(1) COOP & Site-Specific Groups

ALB - (CLB) - Cancer & Leukemia Coop - Group B.
BTSG - Brain Tumor Study Group
CBCG - Cooperative Breast Cancer Group
CCG - Children's Cancer Study Group
COG - Central Oncology Group
EST - Eastern Oncology Cooperative Study Group
GOG - Gynecologic Oncology Group
GTSG - Gastrointestinal Tumor Study Group
MMG - Melanoma Clinical Cooperative Group
NBCCGA - National Bladder Cancer Collaborative Group A.
NPCP - National Prostatic Cancer Project
NWTS - Wilm's Tumor Study Group
PBCTG - Primary Breast Cancer Therapy Group
PVSG - Polycythemia Vera Study Group
RHDG - Radiotherapy Hodgkin's Disease Group
RTOG - Radiation Therapy Oncology Group
SEG - Southeastern Cancer Study Group
SWOG - Southwest Oncology Group
UORG - Uro-Oncology Research Group
WCG - (WDP, WLT) - Western Cancer Study Group
WPL - Working Party for Lung Therapy
WTSG - (NWTS) - Wilm's Tumor Study Group

(2) CONTRACTS

MAYO - Mayo Clinic
OCSG - Ovarian Cancer Study Group
SK - Sloan-Kettering Institute (Memorial Center)
VALG - Veterans Administration Lung Cancer Study Group
VASAG - Veterans Administration Surgical Adjuvant Cancer Chemotherapy Study Group

(3) TASK FORCES

BCTF - Breast Cancer Task Force

(4) CENTER & OTHER GRANTS

CF - Comprehensive Cancer Center Florida (Univ. of Miami)
MDA - M.D. Anderson
RPMI - Roswell Park Memorial Institute
SF - Sidney Farber Cancer Center

(5) NON-U.S.

CAN - Canada

EORTC - European Organization for Research on Treatment of Cancer

FRE - France

ITA - Italy

JAP - Japan

NOR - Norway

SAKK - Swiss Group for Clinical Cancer Research

SWS - Switzerland

UICC - Union International Against Cancer

UKM - United Kingdom

PART 19 EPILEPSY

19.1 INTRODUCTION

The EPILEPSY data base, containing citations to abstracts in Epilepsy Abstracts, is available from the NLM computer. It was developed in cooperation with the National Institute for Neurological and Communicative Disorders and Stroke (NINCDS).

The data base is obtained from Excerpta Medica which publishes the monthly periodical Epilepsy Abstracts under contract to NINCDS. The file contains approximately 20,000 abstracts for journal articles published from 1945 to the present. About 1,600 English language abstracts are produced yearly. Updates to this file are made quarterly.

The major mode for searching the file is free text. There is no structured search procedure based on vocabulary classification. Text Words include words from the Title, Abstract, and Keyword fields.

Information on file content or search strategy may be obtained by contacting MEDLARS Management Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014. Phone 201/496-6193.

19.2 ENTERING THE EPILEPSY FILE

To access the EPILEPSY data base enter the command "FILE EPILEPSY or "FILE EP after logging in to ELHILL.

19.3 EPILEPSY UNIT RECORD

The EPILEPSY unit record is the computer-stored information representing one bibliographic citation which appears in Epilepsy Abstracts. The table below lists all of the data elements with their two-letter category qualifiers. The table also indicates the elements which are directly searchable, and those which can be displayed as a result of the three standard "PRINT commands. The two items that can be ranged are Classification Code (CC) and Year of Publication (YP). All data elements may be STRINGSEARCHed.

The EPILEPSY Unit Record

Category Qualifier	Data Element Name	Directly Searchable	"PRINT"	"PRINT FULL"	"PRINT DETAILED"
SI	Source Identification	X	X	X	X
CC	Classification Code	X			X
TI	Title (Extracted)		X	X	X
LA	Language	X		X	X
VT	Vernacular Title				X
AU	Author	X	X	X	X
AD	Address			X	X
SO	Source		X	X	X
JC	Journal Title Code	X			X

<u>Category Qualifier</u>	<u>Data Element Name</u>	<u>Directly Searchable</u>	<u>"PRINT"</u>	<u>"PRINT FULL"</u>	<u>"PRINT DETAILED"</u>
YP	Year of Publication	X	X	X	X
VI	Volume Issue	X			
JT	Journal Title	X			
NO	Note				X
AB	Abstract (Textracted)			X	X
KW	Keywords (Textracted)				X
SJ	Secondary Source Journal				X
TW	Text Word (from Titles, Abstracts, and Keywords)	X			

Here is a sample of a detailed unit record:

1
AU - BRENNER RP
AU - SHARBROUGH FW
AD - MAYO CLIN., ROCHESTER, MINN. 55901
TI - ELECTROENCEPHALOGRAPHIC EVALUATION IN STURGE WEBER SYNDROME.
SO - NEUROLOGY (MINNEAP): 26/7: 629/632,
SJ - 10/04/1977/606
JC - NEURAUSA
SI - EA/10/606
YP - 1976
LA - ENGL
CC - 42
AB - THE MOST CONSISTENT ELECTROENCEPHALOGRAPHIC FINDING IN 16 CASES
OF STURGE WEBER SYNDROME WAS A UNILATERAL REDUCTION OF BACKGROUND
AMPLITUDE IN THE WAKING RECORD. COMPARABLE ASYMMETRIES WERE NOTED
IN THOSE PATIENTS IN WHOM SLEEP RECORDING ALSO WAS DONE.
PHYSIOLOGIC RESPONSES (TO HYPERVENTILATION AND PHOTIC DRIVING)
USUALLY WERE DECREASED ON THE INVOLVED SIDE. THESE HEMISPHERIC
ELECTROENCEPHALOGRAPHIC ABNORMALITIES ARE DETECTABLE IN INFANCY
EVEN BEFORE THE CHARACTERISTIC INTRACRANIAL CALCIFICATION
DEVELOPS. EPILEPTIFORM ACTIVITY, WHEN FOCAL, WAS LIMITED TO THE
INVOLVED HEMISPHERE.
KW - 16 CASES
KW - DIAGNOSIS

The following is a description of each of the data elements in the unit record:

19.3.1 SOURCE IDENTIFICATION (SI)

The source identification for an abstract corresponds to an entry in Epilepsy Abstracts. It may be printed and searched directly in the following format: Source name abbreviated (which is always EA for Epilepsy Abstracts) followed by a slash; volume number of source followed by a slash; then the abstract number, e.g., EA/6/1475. The volume number and abstract number within that volume uniquely defines an item within Epilepsy Abstracts.

19.3.2 CLASSIFICATION CODE (CC)

Subject organization within Epilepsy Abstracts is denoted by a 2-digit code. These classification code numbers, which are listed below, are searchable and rangeable.

CLASSIFICATION CODES

GENERAL ASPECTS

11 Books, Symposia, Congresses and Proceedings

BASIC SCIENCES

21 Physiology

22 Biochemistry

23 Experimental seizures

SEIZURES

31 Clinical Neurophysiological Investigations

32 Clinical Aspects

33 Case Reports

ETIOLOGY

41 Etiopathology

42 Seizures associated with other disorders

GENETICS

SYSTEMIC CHANGES RELATED TO SEIZURES

61 Biochemistry and Metabolism

62 Psychophysiology

DIAGNOSTIC AIDS

71 Electroencephalography

PSYCHOLOGY, SOCIOLOGY AND EPIDEMIOLOGY

81 Psychiatric and Psychological aspects

82 Social and Vocational aspects

83 Forensic aspects

84 Epidemiology

TREATMENT

91 Experimental Pharmacology

92 Medical Treatment

93 Surgical treatment

94 Clinical pharmaceutics

19.3.3 TITLE (TI)

Each of the significant words in titles may be searched directly as text words. See PART 4 of this Manual for a complete discussion of text word generation. Titles for citations retrieved may be printed and words or phrases in titles may be searched indirectly by using the STRINGSEARCH capability.

19.3.4 LANGUAGE (LA)

The language of the original journal article is directly searchable. All languages are spelled out completely i.e., French, Russian, etc. when used as search terms. In addition, the tag FOR (for Foreign) can be used to retrieve all foreign articles. Example:

SS 1 /C?

USER:

NARCOLEPSY AND FOR (LA)

9.3.5 VERNACULAR TITLE (VT)

The Vernacular Title field contains the original language title and is printable only.

9.3.6 AUTHOR (AU)

The Author field is searchable directly as SURNAME followed by a space and first initial, middle initial, e.g., SMITH RA. Author's names print out in the same format used in searching.

9.3.7 ADDRESS (AD)

The address of the author or corporate affiliation is given. It is not directly searchable but can be searched indirectly using the STRINGSEARCH capability.

9.3.8 SOURCE (SO)

The Source field includes the journal title, volume number, and inclusive pagination. Example:

NEUROLOGY (MINNEAP): 8: 314-317

For monographs or books, this field provides the publisher, place of publication, and inclusive pagination. Books analyzed by chapter also provide the book title in this field. Example:

Comparative and Cellular Pathophysiology of Epilepsy,
Exc Med Fdn, Amsterdam, 325-330

Note that the year of publication is not included here but resides in the YP (year of publication) field. Therefore, one should include YP if using non-standard PRINT commands.

9.3.9 JOURNAL TITLE CODE (JC)

The Journal Title Code is a unique Excerpta Medica code representing names of primary journals cited and is based on "CODEN for Periodical Titles," American Society for Testing Materials, Philadelphia, Pennsylvania. These codes are directly searchable.

9.3.10 YEAR OF PUBLICATION (YP)

The year of publication is entered as a 4-digit number, e.g. 1967. The field is searchable and rangeable using the GREATER THAN, LESS THAN and FROM TO search strategies. For example, FROM 1972 TO 1973 will retrieve articles published in 1972 and 1973. To retrieve articles from one year only, the date may be ANDed with the search retrieval.

9.3.11 VOLUME ISSUE (VI)

This field is searchable only. It prints as part of the source field. It provides issue number information in addition to giving the volume number.

19.3.12 JOURNAL TITLE (JT)

This field is searchable only. It prints only as part of the Source (S0) field. Excerpta Medica uses the International Code for the Abbreviations of Titles and Periodicals, International Organization for Standardization of the World Medical Association, for journal title abbreviations. A list of these abbreviations is available from Excerpta Medica upon request. For books for monographs the publis is substituted for the abbreviated title of publication.

19.3.13 NOTE (NO)

This seldom used field is not searchable and is printed only with the "PRINT DETAILED command.

19.3.14 ABSTRACT (AB)

Significant words in abstracts are directly searchable as text words. The field may be indirectly searched using the STRINGSEARCH and SENSEARCH capabilities described in PART 4 of this manual.

19.3.15 KEYWORDS (KW)

Keywords, taken from the index of Epilepsy Abstracts prepared by Excerpta Medica, are directly searchable word by word as text words. The data in this field may be STRINGSEARCHed and SENSEARCHed.

19.3.16 SECONDARY SOURCE JOURNAL (SJ)

This field expands the information in the Secondary Source identification (SI) field. It provides the volume number, issue number, year, page number, and abstract number, e.g., "6/10/1973/225/1265" of the Epilepsy Abstract citation. It is not searchable but is printable.

19.3.17 TEXT WORD (TW)

Text Words, which are directly searchable, include all the words or word fragment which appear in the title, keyword, or the abstract fields. These significant words are collected by a computer program which examines each alphabetic, numeric or alphanumeric string of characters to determine if that string qualifies as a text word. The determination is based on a set of term generation rules which ar discussed in PART 4 of this Manual.

PART 20
MEDLEARN
ON-LINE INSTRUCTION IN THE USE OF MEDLINE

20.1 INTRODUCTION

MEDLEARN is a computer-assisted instruction program which teaches the user how to search the NLM on-line system. Track A of *MEDLEARN* is currently available, and is designed to teach the novice how to perform basic MEDLINE searches. Additional tracks are under development and will address other data bases, search techniques and system capabilities.

20.2 ENTERING THE *MEDLEARN* FILE

MEDLEARN is accessed by the same procedure as that for NEWS, PHONES and FILES, as follows:

PLEASE ENTER USERID OR LOGON

#####

(User enters LOGON followed by the user ID code)

LOGON IN PROGRESS AT (time) ON (date)

NO BROADCAST MESSAGES

DO YOU WANT NEWS, PHONES, FILES OR MEDLEARN?

ENTER YES OR NO:

(after entering YES, the user will be asked:)

WHICH DO YOU WANT?

ENTER NEWS, PHONES, FILES OR MEDLEARN:

(user types MEDLEARN)

'MEDLEARN.NEWS'

(The program presents any news for *MEDLEARN* users)

PROG:

HELLO FROM *MEDLEARN*

YOU ARE NOW CONNECTED TO THE *MEDLEARN* COMPUTER-ASSISTED
INSTRUCTION PROGRAM.

WOULD YOU LIKE THE NEW- OR EXPERIENCED-USER FORMAT?

TYPE N OR E AND STRIKE THE 'CARRIAGE RETURN' OR 'SEND
MESSAGE' KEY. (FOR A REVIEW OF *MEDLEARN* COMMANDS
AND PROGRAM CONVENTIONS, TYPE N)

20.3 OPTIONS

After the user receives some initial instruction from the program, *MEDLEARN* offers the user the following option:

PROG:

DO YOU WISH TO

- A REVIEW THE *MEDLEARN*/MEDLINE TERMINAL CONVENTIONS.
(THIS CHOICE MAY BE REPEATED FOR ADDITIONAL INFORMATION)
- B REVIEW THE *MEDLEARN* COMMANDS.
(THIS CHOICE MAY BE REPEATED FOR ADDITIONAL INFORMATION)
- C HAVE THE *MEDLEARN* PRESENTATION SEQUENCE PRINTED OUT AT YOUR TERMINAL.
- D HAVE PORTIONS OF THE *MEDLEARN* MANUAL PRINTED OUT AT YOUR TERMINAL.
- E BEGIN INSTRUCTION ON THE FUNDAMENTALS OF MEDLINE SEARCHING (TRACK A OF *MEDLEARN*)
- F BEGIN TRACK B (THIS TRACK IS NOT YET OPERATIONAL)

TYPE THE APPROPRIATE LETTER FROM THE LIST OR ENTER A "GO TO ----" COMMAND.

USER:

(User enters the letter desired)

In response to choices A-D, the program will print out the appropriate material and then return the user to the same option menu shown above. By selecting choice E, the user will receive the instructional sequence on MEDLINE, which consists of the following nine chapters:

20.4 *MEDLEARN* PRESENTATION SEQUENCE

CHAPTER	TITLE	CODE
1	LEARNING TO USE A COMPUTER TERMINAL	0100
2	GENERAL STATEMENT ON MEDLINE	0200
3	FIRST SIMULATED MEDLINE SEARCH	0300
4	MESH (MEDICAL SUBJECT HEADINGS)	0400
5	SEARCH STATEMENT CONNECTORS	0500
6	MEDLINE COMMANDS AND PROGRAM MESSAGES	0600

CHAPTER	TITLE	CODE
7	MEDLINE PRINT COMMANDS	0700
8	SECOND SIMULATED MEDLINE SEARCH	0800
9	TRACK 'A' CUMULATIVE QUIZ	0900

The user will be guided through this sequence automatically, or may elect to tailor the instruction to his own needs by entering the "GO TO _____ command. For example, to switch directly to Chapter 4 on MeSH, the user would type

"GO TO 400

where 400 is the code corresponding to the desired chapter as shown in the presentation sequence. (The leading zero is optional; 400 or 0400 may be used.) The presentation sequence may be printed at the terminal by selecting choice C from the option menu.

20.5 LENGTH OF SESSION

MEDLEARN users are encouraged to adjust the length of their sessions to suit their individual comfort, time restrictions and learning speeds. The program provides a re-entry code during the logoff procedure which may be used in the "GO TO _____ command to begin the next session at the point where the previous one was terminated. Track A of *MEDLEARN* requires approximately 4 hours to complete.

20.6 MATERIALS REQUIRED TO USE *MEDLEARN*

All necessary instructions on how to use *MEDLEARN* are included within the program itself. The only additional material required is a copy of Medical Subject Headings (MeSH).

20.7 AVAILABILITY OF *MEDLEARN*

MEDLEARN is available exclusively from the National Library of Medicine compute in Bethesda, Maryland, Monday through Friday. It may be accessed prior to 9 a.m. from 11 a.m. to 2 p.m., and after 6 p.m. Hours of use on Saturdays are not restricted; however, availability is not guaranteed when MEDLINE is not operating.

MEDLEARN is available to all institutions which subscribe to the NLM on-line system, and to educational institutions which may apply for special access on a limited monthly basis. To apply for such temporary access, contact:

National Library of Medicine
 MEDLARS Management Section
 8600 Rockville Pike
 Bethesda, Maryland 20014

Use of *MEDLEARN* is billed at the same rate as other NLM data bases, based on the hourly connect-time charges for prime and non-prime time.

21.1 INTRODUCTION

The BIOETHICS file was developed at the Kennedy Institute of Ethics, Georgetown University, with the aid of grants from the Extramural Programs of the National Library of Medicine and from the Joseph P. Kennedy, Jr. Foundation. As of October 1978, it contains 6,195 citations, dating from 1973.

The citations in BIOETHICS are also available in book form in a series of annual volumes, the Bibliography of Bioethics. The Bibliography is published by Gale Research Company, Book Tower, Detroit, Michigan 48226.

21.1.1 SCOPE AND CONTENT OF BIOETHICS

Bioethics is the study of value questions arising in health care or biomedical research. BIOETHICS includes citations to materials which discuss the ethical and public policy aspects of the following topics and subtopics:

BIOETHICS, IN GENERAL
HISTORY OF MEDICAL ETHICS
CODES OF PROFESSIONAL ETHICS
PHYSICIAN PATIENT RELATIONSHIP
 Disclosure
 Informed Consent
 Treatment Refusal
 Confidentiality
 Malpractice
HEALTH CARE
 Patients' Rights
 Cost of Health Care
 Resource Allocation
CONTRACEPTION
 Availability of Contraceptives
 to Minors
 Involuntary Sterilization
ABORTION
POPULATION
 Right to Reproduce
 Population Policy
REPRODUCTIVE TECHNOLOGIES
 Artificial Insemination
 Sex Predetermination
 In Vitro Fertilization
 Embryo Transfer
 Cloning
GENETIC INTERVENTION
 Genetic Counseling
 Genetic Screening
 DNA Therapy
 Recombinant DNA Research
 Eugenics
SOCIOBIOLOGY

MENTAL HEALTH THERAPIES
 Psychotherapy
 Operant Conditioning
 Psychoactive Drugs
 Electrical Stimulation of the Brain
 Psychosurgery
 Involuntary Commitment
 Right to Treatment
HUMAN EXPERIMENTATION
 Informed Consent
 Behavioral Research
 Research on Children
 Research on Pregnant Women
 Research on Fetuses
 Research on Prisoners
 Research on the Mentally Handicapped
 Social Control
ARTIFICIAL AND TRANSPLANTED
 ORGANS OR TISSUES
 Organ or Tissue Donation
 Heart
 Kidney
 Blood
 Other Organs or Tissues
DEATH AND DYING
 Determination of Death
 Terminal Care
 Prolongation of Life
 Allowing to Die
 Euthanasia
INTERNATIONAL DIMENSIONS OF
 BIOLOGY AND MEDICINE
 Biological Warfare
 Physicians and Violence
 Resource Allocation

... The BIOETHICS FILE incorporates a variety of media and literary forms, including journal and newspaper articles, monographs, analytics (essays in monographs), court decisions, bills, laws, and audiovisuals. Materials are selected from the literature of medicine, nursing, the biological sciences, philosophy, religion, law, and the behavioral sciences, as well as from the popular media. The data base is comprehensive for English-language materials published from 1973 to the present. No abstracts are included.

In the selection of materials to be indexed for BIOETHICS, a cross-disciplinary monitoring system is employed. Sixty indexes and other reference tools and seventy journals and newspapers are systematically reviewed for pertinent citations and documents. In addition, four data bases are regularly searched i.e., CATLINE, MEDLINE, Bibliographic Citation File of the Library of Congress, and the New York Times Information Bank. A list of the sources selectively monitored is included as an appendix to this chapter.

Information on data elements, search strategy, or system and communications problems may be obtained by contacting the MEDLARS Management Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014, Phone: 301/496-6193 or toll free 800/638-8480. Problems with the content of the file should be addressed to the Center for Bioethics, Kennedy Institute of Ethics, Georgetown University, Washington, D.C. 20057, Phone: 301/625-2371.

21.2 ENTERING THE BIOETHICS FILE

To access BIOETHICS, login to ELHILL at NLM in the usual way and enter the command FILE BIOETHICS after any USER: cue.

21.3 BIOETHICS UNIT RECORD

The BIOETHICS unit record is the computer-stored information representing one journal or newspaper article, chapter in a monograph, monograph, court decision, bill, law, audiovisual, or unpublished document. The table below lists the data elements that comprise the unit record, together with their two-letter category qualifiers, print status, and the publication types that contain the data element.

The BIOETHICS Unit Record

Category Qualifier	Element Name	Search Status	PRINT	PRINT FULL	PRINT DETAILED
AU	AUTHOR	*	Y	Y	Y
BN	ISBN	*	N	N	Y
CN	CORPORATE NAME	TW	Y	Y	Y
EM	ENTRY MONTH	*	N	N	Y
IM	IMPRINT		Y	Y	Y
IS	ISSN	*	N	N	Y
KW	KEYWORD	*	N	N	Y
LA	LANGUAGE	*	N	Y	Y
MH	MESH HEADING	*	N	Y	Y
MN	MESH TREE NUMBER	*	N	N	N
NO	NOTE		N	N	Y
PT	PUBLICATION TYPE	*	N	N	Y
RF	NUMBER OF REFERENCES		N	N	Y
SH	SUBHEADING	*	N	N	N

The BIOETHICS Unit Record

<u>Category Qualifier</u>	<u>Element Name</u>	<u>Search Status</u>	<u>PRINT</u>	<u>PRINT FULL</u>	<u>PRINT DETAILED</u>
SJ	SUBJECT HEADING		N	N	Y
SO	SOURCE		Y	Y	Y
TI	TITLE	TW	Y	Y	Y
TJ	TITLE OF JOURNAL	*	N	N	N
TM	TITLE OF MONOGRAPH		Y	Y	Y
TW	TEXT WORDS	*	N	N	N
UI	UNIQUE IDENTIFIER	*R	N	N	Y
VI	VOLUME/ISSUE		N	N	N
YR	YEAR	*R	N	N	Y

¹The following abbreviations are used for search status: * = Directly Searchable, R = Rangeable, TW = Text Word Searchable.

Following are sample PRINT DETAILED unit records for a journal article and a monograph chapter:

Journal Article:

AU - McCORMICK, RICHARD A
 TI - TO SAVE OR LET DIE: THE DILEMMA OF MODERN MEDICINE.
 SO - JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 229(2): 172-176, 8 JUL 1974.
 MH - *EUTHANIA, PASSIVE
 MH - ETHICS
 MH - *ABNORMALITIES
 MH - *DECISION MAKING
 MH - LIFE SUPPORT CARE
 MH - SOCIAL RESPONSIBILITY
 MH - *INFANT, NEWBORN
 MH - INTERPERSONAL RELATIONS
 LA - ENG
 EM - 7712
 IS - 0002-9955
 PT - JOURNAL ARTICLE
 UI - 01129
 YR - 74
 RF - 8 REFS.
 KW - *ALLOWING TO DIE
 KW - CHRISTIAN ETHICS
 KW - *CONGENITAL DEFECTS
 KW - *DECISION MAKING
 KW - EXTRAORDINARY TREATMENT
 KW - MORAL OBLIGATIONS
 KW - *NEWBORNS
 KW - PROLONGATION OF LIFE
 KW - *QUALITY OF LIFE
 KW - SOCIAL INTERACTION
 KW - STANDARDS
 KW - VALUE OF LIFE

Monograph Chapter (Analytic):

AU - SORENSEN, JAMES R
TI - FROM SOCIAL MOVEMENT TO CLINICAL MEDICINE--THE ROLE OF LAW AND
THE MEDICAL PROFESSION IN REGULATING APPLIED HUMAN GENETICS.
TM - IN: MILUNSKY, AUBREY; ANNAS, GEORGE J., EDS. GENETICS AND THE
LAW.
IM - NEW YORK::PLENUM PRESS,:1976. P. 467-485.
MH - *EUGENICS
MH - LEGISLATION
MH - MENTAL RETARDATION
MH - STERILIZATION, INVOLUNTARY
MH - HISTORY
MH - *GENETICS
MH - *MEDICINE
MH - *GENETIC COUNSELING
MH - *GOAL
MH - REPRODUCTION
MH - DECISION MAKING
MH - PARENTS
MH - AMNIOCENTESIS
MH - ABORTION, EUGENIC
MH - ATTITUDE
LA - ENG
EM - 7712
NO - ESSAY FOLLOWED BY DISCUSSION ON P. 487-494.
PT - ANALYTIC
UI - 03605
YR - 76
RF - 22 REFS.
BN - 0-306-30906-8.
KW - *EUGENICS
KW - LEGISLATION
KW - MENTALLY RETARDED
KW - INSTITUTIONALIZED PERSONS
KW - INVOLUNTARY STERILIZATION
KW - HISTORICAL ASPECTS
KW - *GENETICS
KW - *MEDICINE
KW - *GENETIC COUNSELING
KW - *GOALS
KW - REPRODUCTION
KW - DECISION MAKING
KW - PARENTS
KW - AMNIOCENTESIS
KW - SELECTIVE ABORTION
KW - ATTITUDES
KW - *LEGAL ASPECTS
SJ - EUGENICS/LEGAL ASPECTS
SJ - MEDICINE/GENETICS
SJ - GENETIC COUNSELING/GOALS

21.3.1 AUTHOR (AU)

When a document has three or fewer authors, each author name is included in the database. In the case of four or more authors, only the first named is included, followed by the designation et al. Authors are directly searchable and are entered by the user last name first, space, followed by one, two, or three initials, and diacritics are ignored for searching, e.g.:

CLOUSER, KD
MCCORMICK RA
SKEGG, PDG
LAPPE, M

Indications of rank, degree, and title including JR and SR are omitted from the database.

Author names are printed out in a different form from that used for searching. Full names, initials, or internal punctuation may appear in the printed citation. Any letter modified by a diacritical mark will be printed online with a colon immediately preceding it. The author query examples above would print out as follows:

AU - CLOUSER, K. DANNER
AU - MCCORMICK, RICHARD A
AU - SKEGG, P.D.G
AU - LAPP:E, MARC

When appropriate, designations of the function of the author(s) are included in the database and appear in printed citations, e.g.:

AU - FLOYD, MARY K., COMP

In cases of multiple authorship, the function designation appears only after the last named author:

AU - CLOUSER, K. DANNER
AU - ZUCKER, ARTHUR: COMPS

or

AU - LAPP:E, MARC
AU - MORISON, ROBERT S.: EDS

It should be emphasized that when entering an author's name for searching only the last name and initials (without punctuation) should be used.

The truncation symbol (:) and the single variable character symbol (#) should be used when there is uncertainty about the spelling of an author's name or about the correct initials. For example:

M:CORMICK RA
CL#USER KD
SKEGG:
WALTERS L:

First name is actually LeRoy, and the data base index has used both capital letters as initials although the name is one word.

21.3.2 ISBN (BN)

The International Standard Book Number is included, when available, in the unit record of each monograph or analytic (chapter in a monograph) in BIOETHICS. The ISBN is directly searchable but is printed only with the PRINT DETAILED command. Enter all the characters in the string, including hyphens and letters, qualified with (BN). In the BIOETHICS file, all ISBN's carry a period following the last character in the string. It is therefore necessary to input a final period (.) or truncation symbol (:) when searching this element. For example:

SS 1 /C?
USER:
0-674-09931-1. (BN)

or

SS 1 /C?
USER:
0-674-09931-1: (BN)

The ISBN can be used to retrieve all the analytics from a specific monograph that have been included in the data base.

21.3.3 CORPORATE NAME (CN)

This field contains the names of organizations or groups of persons responsible for the authorship of a document. Some examples are:

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO. COMMITTEE ON HUMAN RESEARCH.
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
U.S. COURT OF APPEALS, FIFTH CIRCUIT.
U.S. PUBLIC HEALTH SERVICE.

Corporate names are not directly searchable but may be retrieved using the textword searching and stringsearch capabilities. For example, to retrieve documents authored by the U.S. Public Health Service, the following two-step procedure is used:

SS 15 /C?
USER:
(TW) PUBLIC AND HEALTH AND SERVICE
PROG:
SS (15) PSTG (12)

SS 16 /C?

USER:

TS (CN) :PUBLIC HEALTH SERVICE:

PROG:

SS (16) PSTG (4)

SS 17 /C?

USER:

PRT

PROG:

1

CN - U.S. PUBLIC HEALTH SERVICE. HEALTH SERVICES ADMINISTRATION.

TI - PROCEEDINGS: NATIONAL SYMPOSIUM ON PATIENT' RIGHTS IN HEALTH CARE. WASHINGTON, D.C., 17-18 MAY 1976.

IM - ROCKVILLE, MD.:DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,:1976. 91 P.

2

CN - U.S. PUBLIC HEALTH SERVICE.

TI - RESTRICTIONS APPLICABLE TO STERILIZATION PROCEDURES IN FEDERALLY ASSISTED FAMILY PLANNING PROJECTS.

SO - FEDERAL REGISTER 39(76): 13872-13873, 18 APR 1974.

3

CN - U.S. PUBLIC HEALTH SERVICE.

TI - FINAL REPORT OF THE TUSKEGEE SYPHILIS STUDY AD HOC ADVISORY PANEL.

IM - WASHINGTON:U.S. GOVERNMENT PRINTING OFFICE,: 1973.

4

CN - U.S. PUBLIC HEALTH SERVICE.

TI - PHS SUPPORTED PROGRAMS: STERILIZATION PROCEDURES.

SO - FEDERAL REGISTER 38(183): 26459-26460, 21 SEP 1973.

21.3.4 ENTRY MONTH (EM)

This is a four-digit, computer-assigned number in the form YYMM which indicates the year and month the citation was entered in the the BIOETHICS database. December 1977 would appear as 7712. The first 5,528 citations in BIOETHICS carry 7712 as the entry month. The file is updated every four months, (scheduled for February, June and October) and the citations added carry the year and month of the update as the entry month.

The entry month can be searched alone to obtain the total number of citations added to the file at a particular update. For example:

SS 1 /C?

USER:

7712 (EM)

PROG:

SS (1) PSTG (5528)

The entry month can also be combined with other searchable categories such as MeSH Headings or Keywords to restrict retrieval to a particular time frame. This can be used to update previously-run subject searches on a regular basis.

SS 2 /C?

USER:

HUMAN EXPERIMENTATION AND 7712 (EM)

PROG:

SS (2) PSTG (963)

Please note that the qualifier (EM) should be included.

21.3.5 IMPRINT (IM)

The Imprint field includes the place of publication, the name of the publisher, the date of publication (or the copyright date), and, when appropriate, total or inclusive pagination. Imprint data is included for monographs, analytics (i.e., chapters or essays in monographs), and audiovisual materials. Examples of each follow:

MONOGRAPH¹

AU - VEATCH, ROBERT M

TI - CASE STUDIES IN MEDICAL ETHICS.

IM - CAMBRIDGE, MASS.: HARVARD UNIVERSITY PRESS, :1977. 421 P.

ANALYTIC

AU - JONSEN, ALBERT R

AU - HELLEGERS, ANDR:E E

AU - RAMSEY, PAUL

TI - CONCEPTUAL FOUNDATIONS FOR AN ETHICS OF MEDICAL CARE.

TM - IN: TANCREDI, LAURENCE R., ED. ETHICS OF HEALTH CARE. PAPERS OF THE CONFERENCE ON HEALTH CARE AND CHANGING VALUES, 27-29 NOV 1973.

IM - WASHINGTON: NATIONAL ACADEMY OF SCIENCES, : 1974. P. 3-29.

AUDIOVISUAL

TI - THE GENETIC CHANCE. [VIDEORECORDING].

IM - BOSTON: WGBH/DISTRIBUTION, :1976.

Users who desire additional descriptive cataloging information about the audiovisual materials retrieved by a search should print the Note field, described below.

The Imprint field is not directly searchable but may be stringsearched.

21.3.6 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN for a journal is directly searchable. The data element is always an eight-digit number in the form 0000-0000. It can be searched alone to retrieve all the articles in the data base from a particular journal or it can be combined with other searchable categories to limit retrieval to a specific journal. The qualifier (IS) should be used.

¹ Monographs with UI numbers lower than 03531 carry the pagination in the Note field rather than in the Imprint field. For those citations, when pagination data is required, the user must print the Note field.

SS 3 /C?
USER:
0031-5982 (IS)
PROG:
SS (3) PSTG (13)

The Title of Journal (TJ) is also directly searchable and can be used instead of the ISSN to limit retrieval to a particular journal.

21.3.7 KEYWORDS (KW)

Keywords are indexing terms from the Bioethics Thesaurus which describe the subject content of the document to which they are assigned. The Thesaurus was developed specifically for the cross-disciplinary literature of bioethics, and contains specific ethical, legal and philosophical terms not included in Medical Subject Headings (MeSH). Approximately 60% of the 550 keywords from the Bioethics Thesaurus are identical or equivalent to MeSH terms. Equivalent BIOETHICS keywords are mapped to the appropriate MeSH heading, and the user may search using either the Keyword or the MeSH equivalent.

For example:

<u>Keyword</u>	<u>MeSH Equivalent</u>
Allowing to Die	Euthansia, Passive
Confidentiality	Privileged Communication
Human Experimentation	Human Experimentation
Informed Consent	Informed Consent
Involuntary Commitment	Commitment of Mentally Ill
Utilitarianism	Ethics

Bioethics keywords mapped to a MeSH term may be entered without a qualifier, e.g.,

SS 1 /C?
USER:
ALLOWING TO DIE
PROG:
SS (1) PSTG (585)

SS 2 /C?
USER:
CONFIDENTIALITY
PROG:
SS (2) PSTG (416)

The default in subject searching is to MeSH Headings; when searching a BIOETHICS keyword that is not mapped to a MeSH equivalent, the user must qualify the keyword.

SS 7 /C?
USER:
*PERSONHOOD (KW)
PROG:
SS (7) PSTG (107)

If an unmapped keyword is not qualified with (KW), a NO POSTINGS message will result

SS 7 /C?

USER:

*PERSONHOOD

PROG:

NP (PERSONHOOD (MH))

Keywords may be preceded by an asterisk (*) to retrieve only articles in which the requested keyword is a major point. However, because of the nature of the keyword field, all asterisked keywords are found in a different place in the index from non-asterisked keywords. For example:

USER:

NBR *PERSONHOOD (KW)

PROG:

POSTINGS	TERM
2	*PERINATOLOGY
3	*PERSONALITY
107	*PERSONHOOD
5	*PHENYLKETONURIA
1	*PHILIPPINES

UP N OR DOWN N?

USER:

NBR PERSONHOOD (KW)

PROG:

POSTINGS	TERM
3	PERINATOLOGY
42	PERSONALITY
397	PERSONHOOD
25	PHENYLKETONURIA
2	PHILIPPINES

UP N OR DOWN N?

This means the NBRDET command does not work for keywords as it does for MeSH terms where the asterisked term is displayed immediately after that term and its total postings. For example:

USER:

NBRDET EUTHANASIA, PASSIVE

PROG:

POSTINGS	TERM
237	*EUTHANASIA (MH)
1	EUTHANASIA EDUCATIONAL COUNCIL (KW)
585	EUTHANASIA, PASSIVE (MH)→Total postings for the term.
237	*EUTHANASIA, PASSIVE (MH)→Of the 585 postings, 237 have the term as the main part of the article.

UP N OR DOWN N?

USER:
NBRDET PERSONHOOD
PROG:

POSTINGS	TERM
1	PERSONALITY AND SOCIAL PSYCHOLOGY BULLE (TJ)
1	PERSONALIZED (TW)
8	PERSONHOOD (TW)
397	PERSONHOOD (KW) → Total postings for the term. To find o 1 PERSONNEL (TW) how many of the 397 postings have the term as a main point of the article, NBR *PERSONHOOD.

UP N OR DOWN N?

In addition to terms from the controlled vocabulary of the Bioethics Thesaurus, proper names (identifiers) are also included in the keyword field. Like other keywords, identifiers may be searched as asterisked terms. Among the various types of identifiers are the names of persons, corporate bodies, laws, court decisions, and geographic areas:

QUINLAN, KAREN (KW)
AMERICAN MEDICAL ASSOCIATION (KW)
*NATIONAL INSTITUTES OF HEALTH (KW)
CALIFORNIA NATURAL DEATH ACT (KW)
*CANTERBURY V. SPENCE (KW)
GREAT BRITAIN (KW)

Note: Names of persons are entered in inverted order using the comma after the surname. Use of the truncation symbol will assist in retrieving variant forms of names:

QUINLAN, K: (KW)
or
QUINLAN: (KW)

The qualifier (KW) must be used with any keyword which is not a MeSH heading.

21.3.8 LANGUAGE (LA)

The value for this field is a 3-letter abbreviation of the language, e.g., English=ENG. At the present time, BIOETHICS contains only English language materials.

21.3.9 MeSH HEADINGS (MH)

MeSH Headings are indexing terms from Medical Subject Headings (MeSH) and may be used to search the BIOETHICS file. Each record in the file carries a list of MeSH Headings which are the same as, or equivalent to, BIOETHICS keywords (KW) assigned to that record. MeSH terms do not have to be qualified; the default in BIOETHICS is to MeSH Headings.

21.3.10 MeSH TREE NUMBER (MN)

The alphanumeric MeSH Tree Number indicate the position of a MeSH Heading OR equivalent BIOETHICS keyword in the hierarchical arrangement of MeSH terms called MeSH Tree Structures. The MeSH Tree Number is directly searchable in BIOETHICS. Because this field has a terminal period, it must be searched with a period at the end. For example:

WRONG

USER:
C23.240
PROG:
NP (C23.240)

RIGHT

USER:
C23.240.
PROG:
SS (8) PSTG (138)

Explosions work in the usual way:

USER:
exp C23.240
PROG:
SS(7) PSTG (1165)

When a BIOETHICS keyword is mapped to a MeSH Heading, that keyword can be used with the MESHNO or TREE commands and the MeSH number of hierarchy of the MeSH equivalent will be displayed online.

If the user enters the MESHNO or TREE commands with a BIOETHICS keyword that is not mapped to a MeSH Heading, a NOT A MESH MAIN HEADING message will result.

21.3.11 NOTE (NO)

This field is used to record various kinds of information for different publication types. For audiovisual materials, the Note contains important descriptive cataloging information. For other publication types, this field may include supplementary information about the document. The Note is not searchable and is printed with the PRT DETAILED command. The following examples are illustrative of the PRT INCLUDE NO command.

Audiovisual:

TI - THE GENETIC CHANCE. [VIDEORECORDING] .
IM - BOSTON::WGBH/DISTRIBUTION,: 1976.
NO - 1 CASSETTE; 57 MIN.; SOUND; COLOR: 3/4 IN. NOVA PROGRAM NO. 319.
BBC/WGBH CO-PRODUCTION. ORIGINAL BROADCAST JUNE 1976.

Journal Article:

CN - AMERICAN PSYCHIATRIC ASSOCIATION.
TI - AMICUS CURIAE BRIEF IN THE DONALDSON CASE.
SO - AMERICAN JOURNAL OF PSYCHIATRY 132 (1): 109-115, JAN 1975.
NO - BRIEF OF THE AMERICAN PSYCHIATRIC ASSOCIATION AS AMICUS CURIAE
IN SUPPORT OF THE GRANT OF CERTIORARI, O'CONNOR V. DONALDSON.

Monograph:

AU - VEATCH, ROBERT M
TI - VALUE-FREEDOM IN SCIENCE AND TECHNOLOGY: A STUDY OF THE
IMPORTANCE OF THE RELIGIOUS, ETHICAL AND OTHER SOCIO-CULTURAL
FACTORS IN SELECTED MEDICAL DECISIONS REGARDING BIRTH CONTROL.
IM - MISSOULA, MONT.:SCHOLARS PRESS,:1976. 314 P.
NO - HARVARD DISSERTATIONS IN RELIGION NO. 8.

21.3.12 PUBLICATION TYPE (PT)

There are nine different types of publications cited in BIOETHICS. They are:

1. Journal article
2. Newspaper article
3. Monograph
4. Analytic (chapter in a monograph)
5. Court decision
6. Bill
7. Law
8. Audiovisual material
9. Unpublished document

The publication type can be searched directly using the name of a specific type followed by the qualifier (PT):

LAW (PT)

The publication type can also be combined with other data elements:

COURT DECISION (PT) AND VALUE OF LIFE (KW)

MONOGRAPH (PT) AND 77 (YR)

21.3.13 REFERENCES (RF)

This field contains the number of references or footnotes (if any) in the document cited, as well as information about bibliographies included in the document. For example:

RF - 16 refs. 2 fn.

RF - Bibliography: p. 292-296.

21.3.14 SUBHEADINGS (SH)

At the present time BIOETHICS does not utilize subheadings.

21.3.15 SUBJECT HEADING (SJ)

Subject headings are BIOETHICS keywords representing major concepts in the document and under which citations are listed in the Subject Entry Section of the Bibliography of Bioethics. As indicated in the following example, the headings are arranged in syntactical order. This citation would be found in the Bibliography of Bioethics in the Virginia subdivision of the living wills section of the allowing to die portion.

SJ - ALLOWING TO DIE/LIVING WILLS/VIRGINIA

21.3.16 SOURCE (SO)

For journal and newspaper articles, court decisions, and laws the Source field is a composite of two data elements: Title of Journal (TJ) and Volume/Issue (VI).

AU - GARLAND, MICHAEL J

TI - POLITICS, LEGISLATION, AND NATURAL DEATH

SO - HASTINGS CENTER REPORT 6(5): 5-6, OCT 1976.

10

VI

For bills, the Source field displays the bill number, legislative session, date of introduction, pagination, sponsor, and disposition.

CN - U.S. CONGRESS. HOUSE.

TI - A BILL TO AMEND THE PUBLIC HEALTH SERVICE ACT TO REGULATE ACTIVITIES INVOLVING RECOMBINANT DNA AND FOR OTHER PURPOSES.

SO - H.R. 7418, 95TH CONG., 1ST SESS., 24 MAY 1977. 40 P. BY PAUL G. ROGERS. REFERRED TO THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE.

For unpublished documents, the source field provides information about the date, pagination, and availability of each document.

CN - CAMBRIDGE, MASSACHUSETTS. CITY COUNCIL.

TI - HEARING ON RECOMBINANT DNA EXPERIMENTATION. 7 JUL 1976.

SO - UNPUBLISHED DOCUMENT. 7 JUL 1976. 296 P. AVAILABLE FROM
THE CAMBRIDGE CITY COUNCIL, CITY HALL, CAMBRIDGE, MA 02139

The source field is displayed with all PRINT commands.

21.3.17 TITLE (TI)

This data element contains the complete title of the document. Words in the titles may be searched using the Text Word capability. For court decisions, the date of the decision is included in the title.

TI - ADEN V. YOUNGER. 18 JUN 1976.

For audiovisual materials, a bracketed medium designator follows the title. Medium designators will follow AACR, chapter 12 (revised 1975) and chapter 14 (revised 1976).

TI - EUTHANASIA. [SOUND RECORDING].

21.3.18 TITLE OF JOURNAL (TJ)

This data element contains the complete journal or newspaper title. In the case of laws and court decisions, the TJ field contains, respectively, the name of the state or federal code or the name of the reporter series. This field can be searched directly. Journal titles appear as part of the composite source field.

21.3.19 TITLE OF MONOGRAPH (TM)

When a chapter (analytic) from a book is indexed, the TM data element contains the names of the authors/editors of the book and the title of the book as a whole.

AU - CAPRON, ALEXANDER M
TI - EXPERIMENTATION AND HUMAN GENETICS: PROBLEMS OF "CONSENT".
TM - IN: MILUNSKY, AUBREY; ANNALS, GEORGE J., EDS. GENETICS AND THE LAW.
IM - NEW YORK::PLENUM PRESS,:1976. P. 319-340.

If a chapter from a book and the book as a whole are authored by the same person, the TM will contain the title of the book as a whole preceded by the appropriate pronoun.

AU - HOLDER, ANGELA R
TI - THE MINOR AS RESEARCH SUBJECT OR TRANSPLANT DONOR.
TM - IN: HER LEGAL ISSUES IN PEDIATRICS AND ADOLESCENT MEDICINE.
IM - NEW YORK::JOHN WILEY,:1977. P. 159-187.

21.3.20 TEXT WORDS (TW)

Text words are directly searchable and are derived from the Title (TI) and the Corporate Name (CN) fields, following ELHILL term generation rules (see PART 4).

21.3.21 UNIQUE IDENTIFIER (UI)

This is a sequential accession number assigned to each citation in the BIOETHICS file. It is both directly searchable and rangeable.

USER:
02019
PROG:
SS (17) PSTG (1)
SS 18 /C?
USER:
PRT INCLUDE UI
PROG:
1
AU - SMITH, TONY
TI - QUEUEING FOR A CHANCE TO LIVE AGAIN.
SO - TIMES (LONDON), 16 DEC 1974, P. 14.
UI - 02019
SS 18 /C?
USER:
CONFIDENTIALITY AND GREATER THAN 02018 (UI)
PROG:
SS (18) PSTG (266)

21.3.22 VOLUME/ISSUE (VI)

For journal articles, the volume/issue data element indicates the volume and issue of the journal in which the article was published. In addition, it includes the pagination of the article and the date of publication of the journal.

43(2): 94-100, MAY 1976.

For newspaper articles, the VI field consists of the date of publication and the pagination.

12 MAR 1978, P. 27

The VI field in court decisions contains the volume of the reporter series and the pagination.

129: 535-551.

For laws, the sections of the code and the date of the law's enactment comprise the VI element.

SECTS. 39-4501 TO 39-4508, 1977.

The volume/issue data appears only as part of the composite Source (S0) field.

21.3.23 YEAR (YR)

This data element indicates the year in which the document was published. It is a two-digit number and is both directly searchable and rangeable. The qualifier (YR) should be used.

SS 1 /C?

USER:

76(YR)

PROG:

SS (1) PSTG (1379)

SS 2 /C?

USER:

*HUMAN EXPERIMENTATION AND FROM 73 to 76 (YR)

PROG:

SS (2) PSTG (647)

21.4 METHODS OF SEARCHING

BIOETHICS can be searched by using either MeSH headings or keywords from the Bioethics Thesaurus. Many keywords in the Bioethics Thesaurus are the same as MeSH terms, for example: ARTIFICIAL ORGANS, BIOETHICS, and GENETIC SCREENING. In other cases, the MeSH term is in inverted order while the BIOETHICS keyword is in natural language order: ETHICS, MEDICAL vs. MEDICAL ETHICS. In all cases where BIOETHICS keywords differ from MeSH in word order, number, or choice of phrase, but where the meaning remains the same, the BIOETHICS keyword is mapped to the MeSH heading.

A user entering BIOETHICS with the MeSH heading EUTHANIA, PASSIVE will retrieve documents indexed by the BIOETHICS keyword ALLOWING TO DIE because this term has been mapped to EUTHANASIA, PASSIVE. It is therefore possible to search this data base by using MeSH. However, in some cases there are no terms in MeSH to which to map BIOETHICS keywords. Examples are BEGINNING OF LIFE, COMMON GOOD, and VALUE OF LIFE. To search on specific philosophical, legal, or ethical concepts, it may be helpful to refer to the Bioethics Thesaurus.

Copies of the Bioethics Thesaurus may be ordered from the Information Retrieval Project, Kennedy Institute of Ethics, Georgetown University, Washington, D.C. 20057 for \$3.00. The Thesaurus is also included in each annual issue of the Bibliography of Bioethics, published by the Gale Research Company.

BIOETHICS can also be searched by using text words as in other MEDLARS data bases.

21.5 BIOETHICS PRINT COMMANDS

There are three standard PRINT commands in BIOETHICS. They are listed below with their abbreviations and the data elements which will be displayed with each for varying publication types.

- Column I indicates the data elements which are printed for journal articles, newspaper articles, bills, court decisions, laws or unpublished documents.
- Column II indicates the data elements which are printed for monographs or audiovisual materials.
- Column III indicates the data elements which are printed for analytics.

PRINT OR PRT	AU - AUTHOR TI - TITLE SO - SOURCE	AU - AUTHOR TI - TITLE IM - IMPRINT	AU - AUTHOR TI - TITLE TM - MONOGRAPH TITLE IM - IMPRINT
PRINT FULL or PRT FU	AU - AUTHOR TI - TITLE SO - SOURCE MH - MeSH HEADING LA - LANGUAGE	AU - AUTHOR TI - TITLE IM - IMPRINT MH - MeSH HEADING LA - LANGUAGE	AU - AUTHOR TI - TITLE TM - MONOGRAPH TITLE IM - IMPRINT MH - MeSH HEADING LA - LANGUAGE
PRINT DETAILED or PRT DL	AU - AUTHOR TI - TITLE SO - SOURCE MH - MeSH HEADING LA - LANGUAGE EM - ENTRY MONTH NO - NOTE IS - ISSN PT - PUBLICATION TYPE UI - UNIQUE IDENTIFIER YR - YEAR OF PUBLICATION	AU - AUTHOR TI - TITLE IM - IMPRINT MH - MeSH HEADING LA - LANGUAGE EM - ENTRY MONTH NO - NOTE PT - PUBLICATION TYPE UI - UNIQUE IDENTIFIER YR - YEAR OF PUBLICATION	AU - AUTHOR TI - TITLE TM - TITLE OF MONOGRAPH IM - IMPRINT MH - MeSH HEADING LA - LANGUAGE EM - ENTRY MONTH NO - NOTE PT - PUBLICATION TYPE UI - UNIQUE IDENTIFIER YR - YEAR OF PUBLICATION RF - REFERENCES BN - ISBN KW - KEYWORDS

¹ When a document is authored by a corporate body, the Corporate Name (CN) is used as the Author.

PRINT
DETAILED
or
PRT DL

RF - REFERENCES
KW - KEYWORDS
SJ - SUBJECT
HEADINGS

BN - ISBN
KW - KEYWORDS
SJ - SUBJECT
HEADINGS

SJ - SUBJECT HEADINGS

All PRINT commands will automatically display 25 lines plus the number of needed to complete the citation being printed at the 25th line. The first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. All the records specified may be displayed by answering YES to each CONTINUE PRINTING? message.

Unit records are printed in reverse order of entry into the file. Thus, citations to documents added most recently will be printed out first.

Tailored PRINT commands, including the Offline Print Option, may be constructed to meet almost any printing requirement (refer to appropriate sections of PARTS 4 and 5).

APPENDIX A

21.6 SOURCES SELECTIVELY MONITORED IN THE PREPARATION OF BIOETHICS

A. Journals and Newspapers

- | | |
|---|--------------------------------------|
| America | Judaism |
| *American Journal of Law and Medicine | *Lancet |
| *American Journal of Nursing | *Linacre Quarterly |
| *American Journal of Psychiatry | *Man and Medicine |
| *American Journal of Public Health | *Medical Care |
| *American Medical News | *Medical World News |
| *American Psychologist | *Medico-Legal Bulletin |
| *American Scientist | *Medico-Legal Journal |
| *Annals of Internal Medicine | Minerva |
| Atlantic | *Modern Medicine |
| *BioScience | *Nature |
| *British Medical Journal | *New England Journal of Medicine |
| *Bulletin of the American Academy
Psychiatry and the Law | *New Physician |
| *Bulletin of the Atomic Scientists | *New Scientist |
| *Bulletin of the History of Medicine | New York Times |
| *Catholic Hospital
Christian Century | New York Times Magazine |
| Chronicle of Higher Education | *Ob. Gyn. News |
| Commentary | *Omega |
| Commonweal | *Perspective in Biology and Medicine |
| Ebony | Pharos |
| Ethics | Philosophy and Public Affairs |
| *Ethics in Science and Medicine | Philosophy East and West |
| Futurist | *Psychology Today |
| *Hastings Center Report | Review of Metaphysics |
| *Hospital Progress | Saturday Review |
| *Hospitals | *Science |
| *Human Life Review | *Science and Government Report |
| *Impact of Science on Society | *Science and Society |
| *International Digest of Health
Legislation | Science for the People |
| *Journal of Legal Medicine | *Scientific American |
| *Journal of Medical Ethics | Sh'ma |
| Journal of Religious Ethics | *Social Biology |
| *Journal of Thanatology | *Social Science and Medicine |
| *Journal of the American Medical
Association | Tradition |
| | Washington Post |
| | *WHO Chronicle |
| | Zygon |

*These titles are listed in List of Journals Indexed in Index Medicus and/or are available through NLM on interlibrary loans.

• Indexes and Other Tools

- Advance Bibliography of Contents:
Political Science and Government
All England Law Reports (subject index)
Australian National Bibliography
Bibliographic Index
British Books in Print
British Humanities Index
British National Bibliography
Canadian Periodical Index
Catholic Periodical and Literature Index
Choice
The Citation Clearinghouse Review
Congressional Information Service
Congressional Record (subject index)
Contents of Current Legal Periodicals
Cumulative Book Index
Cumulative Index to Nursing and Allied Health Literature
Current Contents: Clinical Practice
Current Contents: Social and Behavioral Sciences
Dissertation Abstracts International
Dominion Law Reports (subject index)
Essay and General Literature Index
Family Planning/Population Reporter
General Digest
Harvard Annual Legal Bibliography
Hospital Literature Index
Humanities Index
Index to Canadian Legal Periodical Literature
Index to Christian Science Monitor
Index to Foreign Legal Periodicals
- Index to Legal Periodicals
Index to Periodical Articles Related to Law
Index to Religious Periodical Literature
International Nursing Index
Library of Congress Catalog: Films and Other Materials for Projection
Medical Socioeconomic Research Sources
Mental Retardation and the Law
Modern Federal Practice Digest
Monthly Catalog of U.S. Government Publications
Philosopher's Index
Popular Periodical Index
Population Index
Psychological Abstracts
Public Affairs Information Service Bulletin
Publisher's Weekly
Reader's Guide to Periodical Literature
Religious and Theological Abstracts
Reporter on Human Reproduction and the Law
Science Books and Films
Selected Rand Abstracts
Social Sciences Index
Sociological Abstracts
State Health Legislation Report
Subject Guide to Books in Print
Subject Guide to Canadian Books in Print
Times (of London) Index
Vertical File Index
Wall Street Journal Index
Western Weekly Reports (subject index)

• Data Bases

- MEDLINE and CATLINE of the National Library of Medicine
New York Times Information Bank
Bibliographic Citation File of the Library of Congress

APPENDIX B

21.7 BIOETHICS TERMS MAPPED TO MESH TERMS

BIOETHICS TERMS

ABORTED FETUSES

ABORTION

ABORTION ON DEMAND

ACTIVE EUTHANASIA

ADOLESCENTS

ADOPTION

ADULTS

AGE

AGED

AGGRESSION

AID

AIH

ALCOHOL ABUSE

ALLOWING TO DIE

ALTRUISM

AMNIOCENTESIS

ANCIENT HISTORY

ANESTHESIA

ARTIFICIAL INSEMINATION

ARTIFICIAL ORGANS

ATTITUDES

ATTITUDES TO DEATH

AUDIOVISUAL AIDS

AUTHORITARIANISM

AUTOPSIES

BEHAVIOR DISORDERS

BEHAVIORAL GENETICS

BEHAVIORAL RESEARCH

BENEFICENCE

MESH TERMS (1979)

FETUS

ABORTION

ABORTION, LEGAL

EUTHANASIA

ADOLESCENCE

ADOPTION

ADULT

AGE FACTORS

AGED

AGGRESSION

INSEMINATION, ARTIFICIAL,
HETEROLOGOUS

INSEMINATION, ARTIFICIAL,
HOMOLOGOUS

ALCOHOLISM

EUTHANASIA, PASSIVE

ALTRUISM

AMNIOCENTESIS

HISTORY OF MEDICINE, ANCIENT

ANESTHESIA

INSEMINATION, ARTIFICIAL

ARTIFICIAL ORGANS

ATTITUDE

ATTITUDE TO DEATH

AUDIO-VISUAL AIDS

AUTHORITARIANISM

AUTOPSY

MENTAL DISORDERS

GENETICS, BEHAVIORAL

RESEARCH

ALTRUISM

BIOETHICS TERMS

BIOETHICAL ISSUES
BIOETHICS
BIOLOGICAL WARFARE
BIOLOGY
BIOMEDICAL RESEARCH
BIOMEDICAL TECHNOLOGIES
BIRTH ORDER
BIRTH RATE
BLACKS
BLOOD DONATION
BLOOD TRANSFUSIONS
BONE MARROW
BRAIN
BRAIN DEATH
BRAIN PATHOLOGY
CADAVERS
CANCER
CAPITAL PUNISHMENT
CARCINOGENS
CARRIERS
CASE REPORTS
CENTRAL NERVOUS SYSTEM DISEASES
CHILD NEGLECT
CHILDREN
CHRISTIAN ETHICS
CHROMOSOMAL DISORDERS
CHRONICALLY ILL
CLERGY
CLONING
COMA
COMMUNICABLE DISEASES
COMMUNICATION
COMMUNISM
COMMUNITY MEDICINE
COMMUNITY SERVICES

MESH TERMS (1979)

BIOETHICS
BIOETHICS
BIOLOGICAL WARFARE
BIOLOGY
RESEARCH
TECHNOLOGY, MEDICAL
BIRTH ORDER
BIRTH RATE
BLACKS
BLOOD DONORS
BLOOD TRANSFUSION
BONE MARROW
BRAIN
BRAIN DEATH
BRAIN
CADAVER
NEOPLASMS
CAPITAL PUNISHMENT
CARCINOGENS
HETEROZYGOTES
CASE REPORT
CENTRAL NERVOUS SYSTEM DISEASES
CHILD ABUSE
CHILD
ETHICS
CHROMOSOME ABNORMALITIES
CHRONIC DISEASE
CLERGY
CLONE CELLS
COMA
COMMUNICABLE DISEASES
COMMUNICATION
COMMUNISM
COMMUNITY MEDICINE
SOCIAL WELFARE

BIOETHICS TERMS

CONFIDENTIALITY
CONGENITAL DEFECTS
CONSCIENCE
CONSTITUTIONAL AMENDMENTS
CONSTITUTIONAL LAW
CONTRACEPTION
CONTROL GROUPS
COSTS AND BENEFITS
COUNSELING
CRIMINAL LAW
CULTURAL EVOLUTION
CULTURAL PLURALISM
CURRICULUM
DANGEROUSNESS
DATA BASES
DEATH
DECEPTION
DECISION MAKING
DEMOCRACY
DENTISTRY
DEONTOLOGICAL ETHICS
DEVELOPING COUNTRIES
DIAGNOSIS
DISADVANTAGED
DISCLOSURE
DISSENT
DNA THERAPY
DOMINANT GENETIC CONDITIONS
DONORS
DOWN'S SYNDROME
DRUG ABUSE
DRUG INDUSTRY
DRUGS
DUCHENNE MUSCULAR DYSTROPHY
DUE PROCESS

MESH TERMS (1979)

CONFIDENTIALITY
ABNORMALITIES
CONSCIENCE
LEGISLATION
JURISPRUDENCE
CONTRACEPTION
RESEARCH DESIGN
COST BENEFIT ANALYSIS
COUNSELING
CRIMINAL LAW
CULTURAL EVOLUTION
SOCIAL VALUES
CURRICULUM
DANGEROUS BEHAVIOR
INFORMATION RETRIEVAL SYSTEMS
DEATH
LYING
DECISION MAKING
DEMOCRACY
DENTISTRY
ETHICS
DEVELOPING COUNTRIES
DIAGNOSIS
SOCIOECONOMIC FACTORS
TRUTH DISCLOSURE
POLITICS
GENETIC INTERVENTION
GENES, DOMINANT
TISSUE DONORS
DOWN'S SYNDROME
DRUG ABUSE
DRUG INDUSTRY
DRUGS
MUSCULAR DYSTROPHY
JURISPRUDENCE

BIOETHICS TERMS

DURATION OF COMMITMENT
EASTERN ORTHODOX ETHICS
ECOLOGY
ECONOMICS
EDUCATION
EEG
EGOISM
ELECTRICAL STIMULATION OF THE BRAIN
ELECTROCONVULSIVE THERAPY
EMBRYO TRANSFER
EMERGENCY CARE
EMPLOYMENT
ENGINEERING
EPIDEMIOLOGY
EQUAL PROTECTION
ETHICAL ANALYSIS
ETHICAL RELATIVISM
ETHICS
EUGENICS
EUTHANASIA
EVALUATION
EVOLUTION
EXISTENTIALISM
EXPERT TESTIMONY
EXTRAORDINARY TREATMENT
EYE DISEASES
FAMILY
FAMILY MEMBERS
FAMILY PLANNING
FAMILY RELATIONSHIP
FAMOUS PERSONS
FATHERS
FEDERAL GOVERNMENT
FEMALES

MESH TERMS (1979)

COMMITMENT OF MENTALLY ILL
ETHICS
ECOLOGY
ECONOMICS
EDUCATION
ELECTROENCEPHALOGRAPHY
ETHICS
ELECTRIC STIMULATION
SHOCK THERAPY, ELECTRIC
EMBRYO
EMERGENCY HEALTH SERVICES
EMPLOYMENT
ENGINEERING
EPIDEMIOLOGY
JURISPRUDENCE
ETHICS
ETHICS
ETHICS
EUGENICS
EUTHANASIA
EVALUATION STUDIES
EVOLUTION
EXISTENTIALISM
EXPERT TESTIMONY
LIFE SUPPORT CARE
EYE DISEASES
FAMILY
FAMILY
FAMILY PLANNING
FAMILY
FAMOUS PERSONS
FATHERS
GOVERNMENT
WOMEN

BIOETHICS TERMS

FERTILITY
FETAL DEVELOPMENT
FETUSES
FINANCIAL SUPPORT
FLUORIDATION
FOOD
FREEDOM
FROZEN SEMEN
GENE FREQUENCY
GENE POOL
GENETIC COUNSELING
GENETIC DEFECTS
GENETIC DIVERSITY
GENETIC IDENTITY
GENETIC INTERVENTION
GENETIC SCREENING
GENETICS
GOALS
GOVERNMENT AGENCIES
GOVERNMENT REGULATION
GROUP THERAPY
HANDICAPPED
HEALTH
HEALTH CARE DELIVERY
HEALTH FACILITIES
HEALTH INSURANCE
HEALTH PERSONNEL
HEART DISEASES
HEARTS
HEDONISM
HEMOPHILIA
HEPATITIS
HISTORICAL ASPECTS
HOMOSEXUALS

MESH TERMS (1979)

FERTILITY
FETUS
FETUS
FINANCING, GOVERNMENT
FLUORIDATION
FOOD
FREEDOM
SEmen PRESERVATION
GENE FREQUENCY
GENE POOL
GENETIC COUNSELING
HEREDITARY DISEASES
VARIATION (GENETICS)
PEDIGREE
GENETIC INTERVENTION
GENETIC SCREENING
GENETICS
GOAL
GOVERNMENT AGENCIES
SOCIAL CONTROL, FORMAL
PSYCHOTHERAPY, GROUP
HANDICAPPED
HEALTH
DELIVERY OF HEALTH CARE
HEALTH FACILITIES
INSURANCE, HEALTH
HEALTH MANPOWER
HEART DISEASES
HEART
PHILOSOPHY
HEMOPHILIA
HEPATITIS
HISTORY
HOMOSEXUALITY

BIOETHICS TERMS

HOSPICES
HOSPITALS
HUMAN DEVELOPMENT
HUMAN EQUALITY
HUMAN EXPERIMENTATION
HUMAN RIGHTS
HUMANISM
HUMANITIES
HUNTINGTON'S CHOREA
HYBRIDS
HYPERTENSION
HYPNOSIS
ILLEGAL ABORTION
IMMUNIZATION
IN VITRO FERTILIZATION
INCENTIVES
INDIGENTS
INDUSTRIAL MEDICINE
INDUSTRY
INFANTICIDE
INFANTS
INFLUENZA
INFORMAL SOCIAL CONTROL
INFORMATION DISSEMINATION
INFORMED CONSENT
INSTITUTIONAL OBLIGATIONS
INSULIN
INSURANCE
INTELLIGENCE
INTENSIVE CARE UNITS
INVESTIGATORS
INVOLUNTARY COMMITMENT
INVOLUNTARY EUTHANASIA
INVOLUNTARY STERILIZATION

MESH TERMS (1979)

HOSPICES
HOSPITALS
HUMAN DEVELOPMENT
CIVIL RIGHTS
HUMAN EXPERIMENTATION
HUMAN RIGHTS
HUMANISM
HUMANITIES
HUNTINGTON CHOREA
HYBRIDIZATION
HYPERTENSION
HYPNOSIS
ABORTION, CRIMINAL
IMMUNIZATION
FERTILIZATION
MOTIVATION
POVERTY
INDUSTRIAL MEDICINE
INDUSTRY
INFANTICIDE
INFANT
INFLUENZA
SOCIAL CONTROL, INFORMAL
INFORMATION SERVICES
INFORMED CONSENT
ETHICS, INSTITUTIONAL
INSULIN
INSURANCE
INTELLIGENCE
INTENSIVE CARE UNITS
RESEARCH PERSONNEL
COMMITMENT OF MENTALLY ILL
EUTHANASIA
STERILIZATION, INVOLUNTARY

BIOETHICS TERMS

ISLAMIC ETHICS
JEHOVAH'S WITNESSES
JEWISH ETHICS
JEWS
JUDICIAL ACTION
JUSTICE
KARYOTYPING
KIDNEY DISEASES
KIDNEYS
KILLING
LAW
LEGAL GUARDIANS
LEGAL RIGHTS
LEGISLATION
LEGITIMACY
LEUKEMIA
LIFE INSURANCE
LITERATURE
LIVING WILLS
LOVE
LSD
MALES
MALPRACTICE
MARITAL RELATIONSHIP
MARRIED PERSONS
MASS SCREENING
MEDICAL DEVICES
MEDICAL EDUCATION
MEDICAL ETHICS
MEDICAL FEES
MEDICAL RECORDS
MEDICAL STAFF
MEDICINE
MENTAL HEALTH

MESH TERMS (1979)

ETHICS
CHRISTIANITY
ETHICS
JEWS
JURISPRUDENCE
SOCIAL JUSTICE
KARYOTYPING
KIDNEY DISEASES
KIDNEY
HOMICIDE
JURISPRUDENCE
LEGAL GUARDIANS
CIVIL RIGHTS
LEGISLATION, MEDICAL
ILLEGITIMACY
LEUKEMIA
INSURANCE, LIFE
LITERATURE
WILLS
LOVE
LYSERGIC ACID DIETHYLAMID
MALE
MALPRACTICE
MARRIAGE
MARRIAGE
MASS SCREENING
EQUIPMENT AND SUPPLIES
EDUCATION, MEDICAL
ETHICS, MEDICAL
FEES, MEDICAL
MEDICAL RECORDS
MEDICAL STAFF
MEDICINE
MENTAL HEALTH

BIOETHICS TERMS

MENTAL INSTITUTIONS
MENTALLY ILL
MENTALLY RETARDED
METABOLIC DISEASES
METAETHICS
METHODS
MILITARY PERSONNEL
MINORITY GROUPS
MODEL LEGISLATION
MORAL OBLIGATIONS
MORAL POLICY
MORALITY
MORBIDITY
MORTALITY
MOTHER CHILD RELATIONSHIP
MOTHERS
MOTIVATION
MUNICIPAL GOVERNMENT
MUTATION
NATURAL RESOURCES
NATURAL SELECTION
NEGATIVE EUGENICS
NEGATIVE REINFORCEMENT
NEGLIGENCE
NEWBORNS
NORMATIVE ETHICS
NURSES
NURSING EDUCATION
NURSING ETHICS
NURSING HOMES
NUTRITION
OBLIGATIONS OF SOCIETY
OBLIGATIONS TO SOCIETY

MESH TERMS (1979)

HOSPITAL, PSYCHIATRIC
MENTAL DISORDERS
MENTAL RETARDATION
METABOLIC DISEASES
ETHICS
METHODS
MILITARY PERSONNEL
MINORITY GROUPS
LEGISLATION
SOCIAL RESPONSIBILITY
ETHICS
MORALS
MORBIDITY
MORTALITY
MOTHER-CHILD RELATIONS
MOTHERS
MOTIVATION
MUNICIPAL GOVERNMENT
MUTATION
CONSERVATION OF NATURAL RESOURCES
EVOLUTION
EUGENICS
REINFORCEMENT (PSYCHOLOGY)
MALPRACTICE
INFANT, NEWBORN
ETHICS
NURSES
EDUCATION, NURSING
ETHICS, NURSING
NURSING HOMES
NUTRITION
SOCIAL RESPONSIBILITY
SOCIAL RESPONSIBILITY

BIOETHICS TERMS

OCCUPATIONAL DISEASES
OPERANT CONDITIONING
ORGAN DONATION
ORGAN DONORS
ORGAN TRANSPLANTATION
OVUM DONORS
PAIN
PARENT CHILD RELATIONSHIP
PARENTAL CONSENT
PATIENT ADVOCACY
PATIENTS
PATIENTS' RIGHTS
PEDIATRICS
PEER REVIEW
PERINATOLOGY
PERSONALITY
PHENYLKETONURIA
PHILOSOPHY
PHYSICALLY HANDICAPPED
PHYSICIAN PATIENT RELATIONSHIP
PHYSICIAN'S ROLE
PHYSICIANS
PLACEBOS
PLACENTAS
POLIOMYELITIS
POLITICAL ACTIVITY
POLITICS
POPULATION CONTROL
POPULATION DISTRIBUTION
POSITIVE EUGENICS
POSITIVE REINFORCEMENT
POVERTY
PREGNANT WOMEN
PREMATURITY
PRENATAL DIAGNOSIS

MESH TERMS (1979)

OCCUPATIONAL DISEASES
CONDITIONING, OPERANT
TISSUE DONORS
TISSUE DONORS
TRANSPLANTATION
TISSUE DONORS
PAIN
PARENT-CHILD RELATIONS
INFORMED CONSENT
PATIENT ADVOCACY
PATIENTS
PATIENT ADVOCACY
PEDIATRICS
PEER REVIEW
PERINATOLOGY
PERSONALITY
PHENYLKETONURIA
PHILOSOPHY
HANDICAPPED
PHYSICIAN-PATIENT RELATIONS
PHYSICIAN'S ROLE
PHYSICIANS
PLACEBOS
PLACENTA
POLIOMYELITIS
POLITICS
POLITICS
POPULATION CONTROL
DEMOGRAPHY
EUGENICS
REINFORCEMENT (PSYCHOLOGY)
POVERTY
PREGNANCY
INFANT, PREMATURE
PRENATAL DIAGNOSIS

BIOETHICS TERMS

PREVENTIVE MEDICINE
PRISONERS
PRIVATE HOSPITALS
PRIVILEGED COMMUNICATION
PRODUCTS OF IN VITRO FERTILIZATION
PROFESSIONAL COMPETENCE
PROFESSIONAL ETHICS
PROFESSIONAL PATIENT RELATIONSHIP
PROGNOSIS
PROLONGATION OF LIFE
PROPERTY RIGHTS
PROTESTANT ETHICS
PROTESTANTISM
PSYCHIATRIC DIAGNOSIS
PSYCHIATRY
PSYCHOACTIVE DRUGS
PSYCHOLOGICAL STRESS
PSYCHOLOGY
PSYCHOSURGERY
PSYCHOTHERAPY
PUBLIC ADVOCACY
PUBLIC HEALTH
PUBLIC HOSPITALS
PUBLIC OPINION
PUBLIC PARTICIPATION
PUBLIC POLICY
PUNISHMENT
QUALITY CONTROL
RADIATION
RADIOLOGY
RANDOM SELECTION
RECALL
RECESSIVE GENETIC CONDITIONS
RECOMBINANT DNA RESEARCH

MESH TERMS (1979)

PREVENTIVE MEDICINE
PRISONERS
HOSPITALS, PROPRIETARY
PRIVILEGED COMMUNICATION
FERTILIZATION
CLINICAL COMPETENCE
ETHICS, PROFESSIONAL
PROFESSIONAL-PATIENT RELATIONS
PROGNOSIS
LIFE SUPPORT CARE
CIVIL RIGHTS
ETHICS
CHRISTIANITY
MENTAL DISORDERS
PSYCHIATRY
PSYCHOTROPIC DRUGS
STRESS, PSYCHOLOGICAL
PSYCHOLOGY
PSYCHOSURGERY
PSYCHOTHERAPY
SOCIAL CONTROL, FORMAL
PUBLIC HEALTH
HOSPITALS
PUBLIC OPINION
CONSUMER PARTICIPATION
PUBLIC POLICY
PUNISHMENT
QUALITY CONTROL
RADIATION
RADIOLOGY
RANDOM ALLOCATION
RECALL
GENES, RECESSIVE
DNA, RECOMBINANT

BIOETHICS TERMS

RECORDS
REFERRAL AND CONSULTATION
RELIGION
RELIGIOUS BELIEFS
RELIGIOUS ETHICS
RELIGIOUS HOSPITALS
RENAL DIALYSIS
REPRODUCTION
RESEARCH DESIGN
RESEARCH INSTITUTES
RESEARCH PERSONNEL
RESIDENTIAL FACILITIES
RESUSCITATION
RIGHT TO TREATMENT
RIGHTS
RISKS AND BENEFITS
ROMAN CATHOLIC ETHICS
ROMAN CATHOLICISM
RUBELLA
SCIENCE
SCHIZOPHRENIA
SCRIPTURAL INTERPRETATION
SELECTIVE ABORTION
SELF CONCEPT
SELF DETERMINATION
SEmen DONORS
SEX DETERMINATION
SEX LINKED DEFECTS
SEX OFFENSES
SEX PRESELECTION
SEX RATIO
SEXUALITY
SICKLE CELL ANEMIA
SINGLE GENE DEFECTS

MESH TERMS (1979)

RECORDS
REFERRAL AND CONSULTATION
RELIGION
RELIGION
ETHICS
HOSPITALS, PROPRIETARY
HEMODIALYSIS
REPRODUCTION
RESEARCH DESIGN
ACADEMIES AND INSTITUTES
RESEARCH PERSONNEL
RESIDENTIAL FACILITIES
RESUSCITATION
PATIENT ADVOCACY
CIVIL RIGHTS
RISK
ETHICS
CATHOLICISM
RUBELLA
SCIENCE
SCHIZOPHRENIA
BIBLE
ABORTION, EUGENIC
SELF CONCEPT
FREEDOM
TISSUE DONORS
SEX DETERMINATION
HEREDITARY DISEASES
SEX OFFENSES
SEX PRESELECTION
SEX RATIO
SEX BEHAVIOR
ANEMIA, SICKLE CELL
HEREDITARY DISEASES

BIOETHICS TERMS

SINGLE PERSONS
SITUATIONAL ETHICS
SMOKING
SOCIAL ADJUSTMENT
SOCIAL CONTROL
SOCIAL DOMINANCE
SOCIAL FATHERS
SOCIAL IDENTITY
SOCIAL INTERACTION
SOCIAL PROBLEMS
SOCIAL SCIENCES
SOCIAL WORKERS
SOCIAL WORTH
SOCIALISM
SOCIOECONOMIC FACTORS
SOCIOLOGY OF MEDICINE
SPERM
SPINA BIFIDA
SPOUSAL CONSENT
STATE GOVERNMENT
STATE MEDICINE
STATISTICS
STIGMATIZATION
STOICISM
STUDENTS
SUDDEN INFANT DEATH
SUFFERING
SUICIDE
SUPREME COURT DECISIONS
SURGERY
SYPHILIS
TAY SACHS DISEASE
TEACHING METHODS
TECHNOLOGY

MESH TERMS (1979)

SINGLE PERSON
ETHICS
SMOKING
SOCIAL ADJUSTMENT
SOCIAL CONTROL, FORMAL
SOCIAL DOMINANCE
FATHERS
SOCIAL IDENTIFICATION
INTERPERSONAL RELATIONS
SOCIAL PROBLEMS
SOCIAL SCIENCES
SOCIAL SERVICE
SOCIAL DESIRABILITY
SOCIALISM
SOCIOECONOMIC FACTORS
SOCIOLOGY, MEDICAL
SPERMATOZOA
SPINA BIFIDA
INFORMED CONSENT
GOVERNMENT
STATE MEDICINE
STATISTICS
STIGMATIZATION
PHILOSOPHY
STUDENTS
SUDDEN INFANT DEATH
PAIN
SUICIDE
JURISPRUDENCE
SURGERY
SYPHILIS
TAY SACHS DISEASE
TEACHING
TECHNOLOGY

BIOETHICS TERMS

TELEOLOGICAL ETHICS
TEMPORAL LOBE EPILEPSY
TERMINAL CARE
TERMINALLY ILL
THALASSEMIA
THEOLOGY
THERAPEUTIC ABORTION
THIRD PARTY CONSENT
TISSUE BANKING
TORTURE
TRANSPLANT RECIPIENTS
TRANSPLANTATION
TREATMENT REFUSAL
TWINNING
UNIVERSITIES
UNWANTED CHILDREN
UTILITARIANISM
VALUES
VENEREAL DISEASES
VIABILITY
VIOLENCE
VOLUNTARY EUTHANASIA
VOLUNTARY STERILIZATION
WAR
WHITES
WOMEN'S RIGHTS
X BEARING SPERM
XYY KARYOTYPE
Y BEARING SPERM

MESH TERMS (1979)

ETHICS
EPILEPSY, TEMPORAL LOBE
TERMINAL CARE
TERMINAL CARE
THALASSEMIA
RELIGION
ABORTION, THERAPEUTIC
INFORMED CONSENT
TISSUE BANKS
TORTURE
TRANSPLANTATION
TRANSPLANTATION
PATIENT COMPLIANCE
TWINS
UNIVERSITIES
CHILD, UNWANTED
ETHICS
SOCIAL VALUES
VENEREAL DISEASES
FETAL VIABILITY
VIOLENCE
EUTHANASIA
STERILIZATION, SEXUAL
WAR
WHITES
WOMEN'S RIGHTS
SEX CHROMOSOMES
XYY KARYOTYPE
SEX CHROMOSOMES

PART 22 HISTLINE

22.1 INTRODUCTION

HISTLINE, HISTory of Medicine OnLINE, is a selective online bibliographic data base containing citations to monographs, journal articles, symposia, congresses and similar composite publications from the National Library of Medicine's Bibliography of the History of Medicine (BHM). The scope includes the history of medicine and related sciences, professions, individuals, institutions, drugs and diseases of given chronological periods and geographical areas. Citations for the data base are collected and processed in the History of Medicine Division of the NLM. The sources of the literature in the file are Index Medicus, Current Catalog, a select group of additional journals in the history of medicine and science, and recent publications in fields such as classics and general history.

HISTLINE currently includes approximately 37,000 citations. The majority of items were published from 1970 through 1977, but there are selected citations to literature back to 1964. The data base is expected to increase by about 5,000 citations per year and will be updated monthly.

22.2 ENTERING THE HISTLINE FILE

The data base can be accessed by entering ELHILL at NLM in the usual manner and then typing the command FILE HISTLINE after any USER: cue.

22.3 HISTLINE UNIT RECORD

Each unit record in HISTLINE is the computer-stored information pertaining to one bibliographic citation. The record consists of fifteen (15) data elements. The following table lists the data elements, together with their two-letter category qualifiers; it also indicates which are searchable, and which will be displayed as a result of the three standard PRINT commands.

HISTLINE defaults to searching all directly searchable fields except TA and TW, which must be qualified.

NOTE: There are no abstracts in HISTLINE.

The HISTLINE Unit Record

CATEGORY QUALIFIER	SEARCH	PRINT	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DETAILED
AU	AU		Author	*	X	X	X
AE	AE		Added Entry	*			X
TI	TI		Title	TW	X	X	X
TW	TW		Text Word	*			
KW	KW		Keyword	*		X	X
KS	KW		Keyword Subtopic	*		X	X
TP	KW		Time Period	*		X	X
CY	KW		Country	*		X	X
PS	PS		Personal Name as Subject	*		X	X
CB	CB		Collective Biography	*			X
TA	TA		Title Abbreviation	*		X	X
SO	SO	VI	Source Volume			X	X
DA	DA		Date of Entry	*R			X
UI	UI		Unique Identifier	*			X
EM	EM		Entry Month (YYMM)	*			X

Search Status: * = Directly Searchable; TW = Text Word Searchable;
R = Rangeable

Following is a sample PRINT DETAILED unit record for a journal citation:

AU - WHITE L
 TI - MEDICAL ASTROLOGERS AND LATE MEDICAL TECHNOLOGY.
 TA - VIATOR
 SO - 6:295-308, 1975
 KW - INSTRUMENTS AND EQUIPMENT::500 A.D.-1450:MULTINATIONAL
 KW - MAGIC AND OCCULT::500 A.D.-1450:MULTINATIONAL
 UI - 77004878
 DA - 780815

The following is a description of each of the data elements in the unit record:

22.3.1 AUTHOR (AU)

The author field includes names of authors, co-authors, editors, and/or compilers of the article or monograph. Authors are searched by entering the last name, space, and one initial of the first name followed by a colon, or just the last name followed by a space and a colon. HISTLINE includes up to two initials of the given name; Junior (Jr) or Senior (Sr) should not be used in searching.

To search an author's name, ignore all diacritical marks. For example, K. Deichgräber would be searched as:

DEICHGRABER K:

or

DEICHGRABER :

Any letter modified by a diacritical mark in the original language will be printed online with a colon (:) immediately preceding it, and offline with the actual diacritic immediately preceding it.

Online Printout
DEICHGR:ABER K

Offline Printout
DEICHGR"ABER K

Those articles which have no author will have the title in the AU field because the printed BHM requires these titles to alphabetically interfile in Part III-AUTHORS.

22.3.2 ADDED ENTRY (AE)

The Added Entry field includes the names of individuals such as editors, compilers, etc., associated with the article or monograph apart from those listed in the Author field. In the following example,

Hippocrates: Oeuvres. Texte etabli et traduit par Robert Joly.

Hippocrates is in the Author field and Robert Joly is in the Added Entry field in this format:

AU - HIPPOCRATES
AE - JOLY R

The added entry name (AE) is searched using the same entry format as the author (AU), e.g.,

JOLY R: (AE)

22.3.3 TITLE (TI)

The title field contains the full title of the article or monograph. In the case of non-serial publications, the place and date of publication, publisher, and pagination are included in the title field. Titles are in their original languages, or have been transliterated from Arabic or Russian. Hebrew and Oriental languages are always given English titles which are enclosed within brackets and followed by the appropriate three-character language abbreviation enclosed in parentheses, i.e., HEB, CHI, or JPN. If a title has been translated into English from a language such as French or Spanish which is usually not translated, then the three-character language abbreviation in parentheses follows the title. Titles will appear in the AU field for those articles without author(s) because the printed BHM requires these titles to alphabetically interfile in Part III-AUTHORS.

The complete title can be displayed by all standard PRINT commands, but is searchable only by using Text Word capabilities, (Section 4.6.1) or STRINGSEARCH (Section 4.5.5.5).

22.3.4 TEXT WORD (TW)

A Text Word is a directly searchable word taken from the Title (TI) field. When searching a Text Word, always qualify the term with (TW). The Title field for works other than journal articles may include, in addition to the title, editors, imprint, Congress, language abbreviation, etc., which are searchable as Text Words (TW). (See Section 4.6 for Text Word Term Generation and Section 4.14 for Stopword List.)

Example: A paper is wanted which was presented at a Congress in London about one of the Humboldts. (Date unknown)

SS 1 /C?

USER:

(TW) CONGRESS AND LONDON AND HUMBOLDT

PROG:

SS (1) PSTG (1)

-For searching a name as subject, see 22.3.7

SS 2 /C?

USER:

PRT FULL

PROG:

1

AU - SAUNDERS JB

TI - THE INFLUENCE OF ALEXANDER VON HUMBOLDT ON THE MEDICINE OF WESTERN AMERICA. IN PROCEEDINGS OF THE XXIII INTERNATIONAL CONGRESS OF THE HISTORY OF MEDICINE, LONDON, 1974. P. 523-8.

KW - CLIMATE::1700 TO PRESENT:UNITED STATES

PS - HUMBOLDT, ALEXANDER VON, 1769-1859:1700 TO PRESENT:GERMANY

In the above example the Text Words used in the search are underlined.

Since most foreign titles are not translated into English, it may be necessary to search a Text Word in various languages. A stringsearch can facilitate searching a Text Word root in several languages and in different versions simultaneously as shown below:

Example: Anything on the history of music therapy.

SS 1 /C?

USER:

MUSIC A#D MEDICINE

PROG:

SS (1) PSTG (93)

-A previous search statement must be specified for string-search.

-Precoordinated term from Appendix A.

-For embedded AND see 4.5.2

SS 2 /C?

USER:

TS (TI) :THERAP:

PROG:

SS (2) PSTG (7)

SS 3 /C?

USER:

PRT TI

PROG:

1
TI - VAN SWIETENS HYPOCHONDRIE. ZUR BERUFSKRANKHEIT DER GELEHRten UND
ZUR MUSIKTHERAPIE.

2
TI - DIE BEDEUTUNG DES RHYTHMUS IN DER MUSIKTHERAPIE DER GRIECHEN VON
DER FR:UHZEIT BIS ZUM BEGINN DES HELLENISMUS.

3
TI - MUSIK GEGEN "WAHNSINN"; GESCHICHTE UND GEGENWART
MUSIKTHERAPEUTISCHER VORSTELLUNGEN. [STUTTGART] FINK [C1971] 85 P.

4
TI - MUSIK UND MEDIZIN. IN PARADE GW, ED: SOFORTTHERAPIE
REHABILITATION; VORTR:AGE DES VIII. EUROP:ATISCHEN
FORTBILDUNGSKONGRESSES...1970. M:UNCHEN-GR:AFELFING. DR.
BANASCHEWSKI [1971] P: 233-44.

5
TI - GESCHICHTE UND GRUNDLAGEN DER MUSIKTHERAPIE. DISS. K:OLN, 1971.
90 P.

6
TI - [MAIMONIDES ABOUT MUSIC AS A THERAPEUTIC MEANS] (HEB).

7
TI - MUSIC THERAPY. LONDON, HUTCHINSON [1975]. "THE HISTORICAL
BACKGROUND,: P. 3-70.

In the above print display the string :THERAP: is underlined in the titles
of the printout.

22.3.5 KEYWORD (KW)

The Keyword field consists of the controlled vocabulary used to describe the content or subject matter of an article or monograph in the Bibliography of the History of Medicine (BHM). Terms in this vocabulary are not drawn entirely from the standard MeSH vocabulary, although nearly three-fourths of them are. Non-MeSH terms which are used are those for particular archaic or special topics frequently encountered in historical literature, together with certain combined headings which have been adopted to reduce the cost and size of the published Bibliography.

Four types of Keywords are printed in the (KW) field. They are searchable singly or in Boolean logic combinations. Since the searching default in HISTLINE includes all types of Keywords, it is not necessary to use qualifiers.

The print format of the Keyword (KW) field is:

Keyword:Keyword Subtopic:Time Period:Country

1. Keyword (KW) - The first Keyword is always a broad topic under which all related citations are printed in the BHM; it must be present in the KW field. There are 160 of these Keywords which are listed in Appendix A.
2. Keyword Subtopic (KS) - The Subtopic is a narrower aspect of the broader topic; it is only allowed with six Keywords:

Dentistry (see under Dentistry, Appendix A)

Diseases and Injuries (for specifics see Appendix B)

Drugs and Chemicals (for specifics see Appendix C)

Pharmacy (see under Pharmacy, Appendix A)

Religion and Medicine (see under Religion and Medicine, Appendix A)

Surgery (see under Surgery, Appendix A)

The word GENERAL is used in the Keyword Subtopic position when the article is of a general nature or when no appropriate Subtopic exists (see also Section 22.3.6).

3. Time Period (TP) - (Appendix D) The word MULTIPERIOD is used in the Time Period position when the article spans more than one Time Period or when it does not fit into a specific Time Period (see also Section 22.3.6).

4. Country (CY) - (Appendix E) The word MULTINATIONAL is used in the Country position when the article covers more than one Country or no special area (see also Section 22.3.6).

22.3.5.1 KEYWORDS AND KEYWORD SUBTOPICS (KW and KS)

One or more Keywords are usually assigned by the indexer to each citation in the data base; six of these may be coordinated with one or more appropriate Keyword Subtopics. Keywords, as well as most Keyword Subtopics, time, and geographic headings may be searched singly or with the Boolean operators AND, OR, and AND NOT. However, Subtopics indicated by an asterisk (*) in Appendix A may be used with more than one Keyword and should be coordinated with the desired Keyword to avoid retrieving false drops.

To cover all aspects of a subject one should look for appropriate Keywords and/or Subtopics in Appendices A, B and C. Remember the Subtopic GENERAL may be used for citations of a general nature or when no appropriate Subtopic exists for these six Keywords listed above (see also 22.3.6). However, a search on most Keywords as well as some Subtopics will yield far more citations than are desired. These should, therefore, be limited by ANDing with either a country or time period, or both.

In the unit record displayed online, the Keyword (KW) field is printed with Keyword first, followed by a Keyword Subtopic, then a Time Period, and finally a geographic indicator. The four fields are separated by colons.

KEYWORD:KEYWORD SUBTOPIC:TIME PERIOD:COUNTRY
KW - PHARMACY:GOVERNMENT REGULATION:1700 TO PRESENT:ITALY

If the Keyword does not have a Subtopic, an extra colon is inserted in its place in the online printout, e.g.,

KW - CYTOLOGY::1700 TO PRESENT:ITALY

NOTE: In offline printouts, colons in the KW field are replaced by § .

KW - CYTOLOGY §§ 1700 TO PRESENT § ITALY

Examples of subject searching follow:

Example: Government regulation of pharmacies, 18th century to the present in Italy.

SS 1 /C?

USER:

PHARMACY AND GOVERNMENT REGULATION AND 1700 TO PRESENT AND ITALY

PROG:

SS (1) PSTG (1)

-PHARMACY is a broad Keyword

and GOVERNMENT REGULATION

is an allowable Subtopic

under PHARMACY both from

Appendix A.

-1700 TO PRESENT is from

Appendix D; ITALY from

Appendix E.

1

AU - ASTOLFI A

TI - L'EVOLUZIONE E LE FONTI DELLA LEGISLAZIONE FARMACEUTICA. IN
HIS: LA FARMACIA NELLA GIURISPRUDENZA. PADOVA, EDIZIONE CEDAM,
1975. P. 1-31.

KW - PHARMACY:GOVERNMENT REGULATION:1700 TO PRESENT:ITALY

Example: History of obstetrics in USSR at present.

SS 1 /C?

USER:

OBSTETRICS AND 1700 TO PRESENT AND USSR -OBSTETRICS is a Keyword

PROG:

SS (1) PSTG (16)

from Appendix A.

SS 2 /C?

USER:

PRT 1 FU

PROG:

1

AU - NIKONCHIK OK

TI - KAZVITIE AKUSHERSKO-GINEKOLOGICHESKO:I POMOSHCHI V SSSR.

TA - AKUSH GINEKOL (MOSK)

SO - (9):1-6, 9 SEP 77

KW - GYNECOLOGY::1700 TO PRESENT:USSR

KW - OBSTETRICS::1700 TO PRESENT:USSR

-Double colon after
OBSTETRICS indicates
this Keyword does not
have a Subtopic.

Example: General works on pharmacy in
Renaissance France.

SS 1 /C?

USER:

PHARMACY AND GENERAL AND 1450-1700 AND FRANCE -Only articles dealing

PROG:

SS (1) PSTG (22)

SS 2 /C?

USER:

PRT 1 FU

PROG:

1

AU - FOLCH JOU G

AU - FRANCES MC

TI - L'INFLUENCE DE NICOLAS LEMERY DANS LA PHARMACIE ESPAGNOLE.

TA - VEROEFF INT GES GESCH PHARM

SO - 42:49-54, 1975

KW - PHARMACY:GENERAL:1700 TO PRESENT:SPAIN

PS - L:EMERY, NICOLAS, 1645-1715:1450-1700:FRANCE

-Only articles dealing
with general aspects of
the topic are retrieved.
Articles indexed to per-
mitted specific Subtopics
are not.

-To retrieve every article
on pharmacy in Renaissance
France, search on PHARMACY
AND 1450-1700 AND FRANCE.

Example: Anything on the history of hand surgery.

SS 1 /C?

USER:

SURGERY AND HAND (TW)

PROG:

SS (1) PSTG (7)

-Keywords can be combined
with Text Words when no
Subtopic is available.

-Text Word must be qual-
fied using (TW).

SS 2 /C?

USER:

PRT TI 1

PROG:

TI - HISTORICAL ASPECTS OF MODERN HAND SURGERY. IN KILGORE ES,
GRAHAM WP, ED: THE HAND: SURGICAL AND NON-SURGICAL MANAGEMENT.
PHILADELPHIA, LEA & FEBIGER, 1977. P. 1-5.

22.3.5.2 TIME PERIOD (TP)

Time Periods are:

BEFORE 500 A.D.
500 A.D.-1450
1450-1700
1700 TO PRESENT
MULTIPERIOD

Time Period Keywords are assigned to citations which deal primarily with subjects within specific time spans. Citations which do not fit into any of four specific time periods or cover several periods are indexed under the special search term called MULTIPERIOD (see also 22.3.6). To retrieve articles on any or all specific periods as well as multiperiod, search without a Time Period.

Example: Dermatology from 16th Century to the present.

SS 1 /C?
USER:
DERMATOLOGY
PROG:
SS (1) PSTG (211)

-Note that it was necessary to search on two time periods to fulfill this request.

SS 2 /C?
USER:
1 AND 1450-1700 OR 1 AND 1700 TO PRESENT
PROG:
SS (2) PSTG (166)

Example: Hospitals in Italy covering several time periods.

SS 1 /C?
USER:
HOSPITALS AND MULTIPERIOD AND ITALY
PROG:
SS (1) PSTG (21)

-Only articles dealing with broad chronologic aspects of the topic are retrieved. However, articles indexed under a specific Time Period are not.

SS 2 /C?
USER:
PRT 1 FU
PROG:

1

AU - GUIDO D

TI - LA FARMACIA DEGLI INCURABILI E LA MAIOLICA NAPOLETANA DEL SETTECENTO; NAPOLI, ED. DEL DELFINO, (1972). 54 P. 32 PL.

KW - HOSPITALS::MULTIPERIOD:ITALY

KW - PHARMACY:GENERAL::MULTIPERIOD:ITALY

SS 2 /C?

USER:

HOSPITALS AND ITALY

PROG:

SS (2) PSTG (53)

-All articles on hospitals in Italy, regardless of Time Period, are retrieved because neither MULTIPERIOD nor a specific Time Period was searched.

22.3.5.3 COUNTRY (CY)

Geographic Keywords are assigned to most citations. These are mainly names of individual contemporary countries or regions. Exceptions include the ancient geographic terms of Rome, Babylon, Assyria, Sumer, Byzantium and Greco-Roman, together with the term Arabic, which embraces the medieval Islamic World. All are listed in Appendix E.

Another special search term called MULTINATIONAL is used to cover citations relating either to more than one country or region or to no special area. MULTINATIONAL coordinated with a Keyword or Subtopic will retrieve all citations which have not been indexed under specific countries (see also 22.3.6). If all indexed articles covering all geographics including MULTINATIONAL are wanted, do not include a geographic in the search.

Example: Art in medicine in Greco-Roman society.

SS 1 /C?

USER:

ART A#D MEDICINE AND GRECO-ROMAN

-Embedded AND

PROG:

SS (1) PSTG (4)

SS 2 /C?

USER:

PRT 1 FU

PROG:

1

AU - HIDIROGLOU M

TI - ARTISTIC ANATOMY OF THE HORSE AND HELLENIC SCULPTURE.

TA - CAN VET J

SO - 18(7):196-8, JUL 77

KW - ANATOMY::BEFORE 500 A.D.:GRECO-ROMAN

KW - ANIMALS::BEFORE 500 A.D.:GRECO-ROMAN

KW - ART AND MEDICINE::BEFORE 500 A.D.:GRECO-ROMAN

Example: Histories of dermatology covering several geographic areas.

SS 1 /C?

USER:

DERMATOLOGY AND MULTINATIONAL

PROG:

SS (1) PSTG (44)

-Only articles dealing with broad geographic aspects of the topic are retrieved. However, articles indexed under a specific geographic Keyword are not.

SS 2 /C?

USER:

PRT 1 FU

PROG:

1

AU - SCHOLZ A

TI - DAS BILDNIS DES DERMATOLOGEN.

TA - DERMATOL MONATSSCHR

SO - 163(12):982-95, DEC 77

KW - DERMATOLOGY::1700 TO PRESENT:MULTINATIONAL

KW - PORTRAITS::1700 TO PRESENT:MULTINATIONAL

SS 2 /C?

USER:

DERMATOLOGY

PROG:

SS (2) PSTG (211)

-Articles covering all countries including MULTINATIONAL are retrieved because neither MULTINATIONAL nor a specific Country was searched.

22.3.6 RETRIEVAL OF GENERAL CITATIONS

The History of Medicine's policy of indexing allows for articles of a general nature to be indexed as such, and retrievable as such through the use of the special terms: GENERAL, MULTIPERIOD, and MULTINATIONAL. The following examples illustrate the ways of indexing these general articles:

1. PHARMACY:GENERAL:MULTIPERIOD:MULTINATIONAL
2. SURGERY:AMPUTATION:MULTIPERIOD:MULTINATIONAL
3. HOSPITALS::MULTIPERIOD:MULTINATIONAL

Each of these is explained in detail below.

1. PHARMACY:GENERAL:MULTIPERIOD:MULTINATIONAL

The six Keywords which allow Subtopics will use the term GENERAL in the

Keyword Subtopic position if none of the Subtopics apply. Articles indexed to the term GENERAL will also be indexed to the terms MULTIPERIOD and MULTINATIONAL when no specific Time Period and Country apply. These citations can be retrieved online by the following strategy:

SS 1 /C?

USER:

PHARMACY AND GENERAL AND MULTIPERIOD AND MULTINATIONAL

PROG:

SS (1) PSTG (119)

SS 2 /C?

USER:

PRT 1 FU

PROG:

1

AU - ZALAI K

TI - RELATIONS PHARMACEUTIQUES ENTRE LA FRANCE ET LA HONGRIE.

TA - VEROEFF INT GES GESCH PHARM

SO - 42:171-80, 1975

KW - PHARMACY:GENERAL:MULTIPERIOD:MULTINATIONAL

Of course, if a specific Time Period and/or Country is appropriate, the article will be indexed accordingly. Therefore, the following are possible indexing combinations:

PHARMACY:GENERAL:MULTIPERIOD:SPAIN

PHARMACY:GENERAL:BEFORE 500 A.D.:MULTINATIONAL

PHARMACY:GENERAL:500 A.D.-1450:INDIA

2. Likewise, articles indexed to a Keyword and a specific Subtopic (as opposed to the term GENERAL) will be indexed to MULTIPERIOD and MULTINATIONAL when no specific Time Period and Country are pertinent. For example,

SURGERY:AMPUTATION:MULTIPERIOD:MULTINATIONAL

Again, if a specific Time Period and/or Country is appropriate, the article will be indexed accordingly, e.g.:

SURGERY:AMPUTATION:1700 TO PRESENT:MULTINATIONAL

3. Keywords which do not have allowable Subtopics will always have a double colon in the KW field after the Keyword to show the absence of the Keyword Subtopic. When the articles involve no specific Time Period and no specific Country, the terms MULTIPERIOD and MULTINATIONAL, respectively, are used, e.g.:

HOSPITALS::MULTIPERIOD:MULTINATIONAL

(Remember, specific Time Periods and/or Countries may be used when appropriate.)

Be careful not to use the term GENERAL with a Keyword that does not allow Subtopics. The result of this mistake will be false drops. For example:

SS 2 /C?

USER:

HOSPITALS AND GENERAL

PROG:

SS (2) PSTG (96)

SS 3 /C?

USER:

PRT 3 FU

PROG:

1

AU - VILSMAYER O

TI - WUNDBEHANDLUNG AN DER M:UNCHENER CHIRURGISCHEN
UNIVERSIT:ATSKLINIK 1826 BIS 1942. DISS. M:UNCHEN, 1976. 107 P.

KW - DISEASES AND INJURIES:WOUNDS AND INJURIES:1700 TO PRESENT:GERMANY

KW - HOSPITALS:1700 TO PRESENT:GERMANY

KW - SURGERY:GENERAL:1700 TO PRESENT:GERMANY

2

AU - MARECHAL A

TI - ANNIVERSAIRE DE DEUX COMMUNAUT:ES RELIGIEUSES HOSPITALI:ERES
LI:EGOLIES.

TA - HOP BELGE

SO - 20(130):23-7, 1977

KW - HOSPITALS:MULTI PERIOD:BELGIUM

KW - RELIGION AND MEDICINE:GENERAL:MULTI PERIOD:BELGIUM

3

AU - LOWRY C

TI - HOSPITAL: THE BIOGRAPHY OF BENEDICTINE. MONROE, NEW YORK,
LIBRARY RESEARCH ASSOCIATES, 1976. XI, 188 P.

KW - HOSPITALS:1700 TO PRESENT:UNITED STATES

KW - RELIGION AND MEDICINE:GENERAL:1700 TO PRESENT:UNITED STATES

22.3.7 PERSONAL NAME AS SUBJECT (PS)

The Personal Name as Subject field includes proper names of individuals indexed as subjects of the article or monograph. This field is used for historical biographies of physicians, scientists and famous persons in their relationship to medicine. Personal names as subjects are usually

indexed with a Time Period Keyword (Appendix D) and a Geographic Keyword (Appendix E).

To retrieve a personal name as subject, enter the name, followed by a comma, a space, and the first initial followed by a colon. The NEIGHBOR command should be used to determine correct spelling of a name.

Example: Anything on Mahatma Gandhi.

SS 1 /C?

USER:

NBR GANDHI: (PS)

PROG:

POSTINGS TERM

1 GAMALEIA, NIKOLAI FEDOROVICH, 1859-1949

2 GAMGEE FAMILY

11 GANDHI, MOHANDAS KARAMCHAND, 1869-1948

1 GANIVET, JEAN, FL. 1431-1434

1 GANNUSHKIN, PETER BORISOVICH, 1875-1933

UP N OR DOWN N?

USER:

FIND GANDHI, M: (PS)

PROG:

SS (1) PSTG (11)

SS 2 /C?

USER:

PRT 1 FULL

PROG:

1

AU - LORIMER R

TI - A RECONSIDERATION OF THE PSYCHOLOGICAL ROOTS OF GANDHI'S
TRUTH

TA - PSYCHOANAL REV

SO - 63(2):191-207, SUMMER 76

KW - PSYCHOLOGY:1700 TO PRESENT:INDIA

PS - GANDHI, MOHANDAS KARAMCHAND, 1869-1948:1700 TO PRESENT:INDIA

NOTE: When HISTLINE is regenerated, this field will be searchable in the same format as the Author (AU) field; it will then be necessary to always qualify when searching names as subjects.

22.3.8 COLLECTIVE BIOGRAPHY (CB)

The Collective Biography field indicates the work is on the lives of three or more physicians, scientists, or notable persons. The way to search the (CB) field is to enter the term COLLECTIVE BIOGRAPHY and coordinate with

the author of the document, Time Period, Country, Keyword and/or Subtopic.

Example: A collective biography on philosophy.

SS 1 /C?

USER:

COLLECTIVE BIOGRAPHY AND PHILOSOPHY

-ANDed with a Keyword

PROG:

SS (1) PSTG (4)

SS 2 /C?

USER:

PRT 1 DL

PROG:

1

AU - SAINT-L:OT T

TI - PHILOSOPHIE UND MEDIZIN IN ERLANGEN AUF DER GRUNDLAGE DER VORLESUNGSVERZEICHNISSE VON 1780 BIS 1806. DISS. ERLANGEN-N:URNBERG, 1976. 156 P.

KW - EDUCATION, MEDICAL::1700 TO PRESENT:GERMANY

KW - PHILOSOPHY::1700 TO PRESENT:GERMANY

CB - COLLECTIVE BIOGRAPHY:1700 TO PRESENT:GERMANY

UI - 76004027

DA - 770923

22.3.9 TITLE ABBREVIATION (TA)

The Title Abbreviation field contains the title abbreviation for journals as found in the NLM List of Journals Indexed in Index Medicus. Those journals not found in IM are abbreviated using the rules of the International Standard ISO-4-1972: Documentation-International Code for the Abbreviation of Titles of Periodicals. Of course, many IM journals are included in HISTLINE as a result of the history of medicine search profile regularly run against the MEDLINE file. (NOTE: Additional citations are obtained from abstract publications and may be from journals not included in the NLM collection.)

22.3.10 SOURCE (SO)

The Source at present is a field which includes the volume, issue, pagination, and publication data of a journal article. It is printable but not searchable. (The bibliographic information for monographs is found in the (TI) field and includes the editor, imprint, series statement, and pages.)

WARNING: When issuing tailored PRINT commands, be sure to specify both the TA and SO fields to get complete source information.

22.3.11 DATE OF ENTRY (DA)

The entry date is a six-digit number in the form of year, month, day (YYMMDD) indicating the date the citation was entered into the HISTLINE data base. The entry date is rangeable using the format FROM TO , GREATER THAN and LESS THAN (see 4.5.5.6) and can be useful in retrieving citations added to the data base since the last update or the last time the search was processed.

22.3.12 ENTRY MONTH (EM)

The Entry Month is a four-digit number in the form of year, month (YYMM) indicating the year and month the citation was entered in the HISTLINE data base. Entry Month is not rangeable; use the Date of Entry (DA) field for that capability.

This data element is not in the data base at this writing; further information will be supplied as it becomes available.

22.3.13 UNIQUE IDENTIFIER (UI)

The Unique Identifier is a sequential accession number assigned to each citation entered into the data base. It is directly searchable and can also be searched using the ranging capability.

22.4 HISTLINE PRINT COMMANDS

There are three standard PRINT commands in HISTLINE. They are listed below with their abbreviations and the data elements which will be displayed with each:

1) PRINT or PRT

AU - Author
TI - Title
TA - Title Abbreviation
SO - Source

2) PRINT FULL or PRT FU

AU - Author
TI - Title
TA - Title Abbreviation
SO - Source
KW - Keyword
PS - Personal Name As Subject

3) PRINT DETAILED or PRT DL

AU - Author
TI - Title
TA - Title Abbreviation
SO - Source
KW - Keyword
PS - Personal Name As Subject
CB - Collective Biography
AE - Added Entry
UI - Unique Identifier
DA - Date of Entry
EM - Entry Month

Tailored PRINT commands, including the offline Print option, may be constructed to meet almost any printing requirement. Remember to specify both the TA (Title Abbreviation) and SO (Source) fields to get complete source information.

All PRINT commands will automatically display 25 lines plus the number of lines needed to complete the citation being printed at the 25th line. If you specify a large number of unit records, the first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) message. The total number of records specified may be displayed by answering YES to each CONTINUE PRINTING? message.

The HISTLINE data base can also be searched using OFFSEARCH and STORESEARCH. See PART 5 for further explanation.

22.5 APPENDIX A

List of controlled vocabulary searchable as the KEYWORD (KW) data element. Keyword Subtopics appear as indentions under the allowable Keyword.

Acupuncture use Therapeutics
 Aerospace Medicine
 Alchemy use Chemistry and Biochemistry
 Anatomy
 Anesthesiology
 Animals
 Anthropology use Anatomy; Evolution; Science; Race
 Antisepsis use Communicable Disease Control; Surgery
 Anti-Vivisection use Animals; Research
 Art and Medicine
 Awards and Prizes
 Balneology, Hydrotherapy, and Health Resorts
 Biology
 Biophysics
 Birth Control
 Blacks
 Blood Transfusion
 Botany
 Cardiology and Circulatory System
 Chemistry and Biochemistry
 Child Health
 Climate
 Cold
 Communicable Disease Control
 Congresses
 Cytology
 Death
 Demography use Statistics and Demography
 Dentistry
 Education*
 Instruments and Equipment*
 Societies*
 Dermatology

Diagnosis
 Diseases and Injuries
 For specific diseases, see Appendix B
 Drugs and Chemicals
 For specific drugs, see Appendix C
 Ecology
 Economics, Medical
 Education, Medical
 Embryology
 Emergency Care
 Endocrinology
 Engineering use Instruments and Equipment
 Environmental Health use Ecology; Sanitation
 Epidemiology
 Ethics, Medical
 Evolution
 Exhibits
 Famous Persons
 Fertility use Generation and Reproduction; Statistics and Demography
 Folk and Popular Medicine
 Foods and Food Supply
 Forensic Medicine
 Gastroenterology and Digestive System
 General Practice
 Generation and Reproduction
 Genetics and Heredity
 Geriatrics use Gerontology
 Gerontology
 Gynecology
 Health Education
 Health Occupations and Professions
 Health Resorts use Balneology, Hydrotherapy, and Health Resorts

*Indicates Subtopics which should always be ANDed with their Keyword.

*Terms in parentheses are older versions of the Keyword and should be ORed with the new term.

APPENDIX A (continued)

Hematology
Herbals
Histology
Historiography and History of Medicine
Homeopathy
Hospitals
Hospitals, Psychiatric
Human Development and Growth
Hygiene
Hypnosis
Immunology
Industrial Medicine use Occupational Medicine
Infant Hygiene use Child Health
Instruments and Equipment (or Instruments)**
Insurance use Economics, Medical; Statistics and Demography
International Health
Jews
Journalism use Periodicals
Laboratories and Research Institutes
Libraries
Licensure and Regulation
Literature and Medicine
Magic and Occult
Manuscripts
Maternal Health
Mathematics
Medical Illustration
Medical Theory use Philosophy
Medicine
Mental Health
Meteorology use Climate
Microbiology
Microscopy
Military Medicine
Molecular Biology
Mortuary Practices
Musculoskeletal System
Museums
Music and Medicine

Naval Medicine
Neurology
Nosology use Terminology and Nomenclature
Numismatics
Nursing
Nutrition and Diet
Obstetrics
Occupational Medicine
Odontology use Dentistry
Ophthalmology
Optics
Orthopedics
Osteopathy
Otorhinolaryngology
Paleopathology
Parasitology
Pathology
Pediatrics
Periodicals
Pharmacology
Pharmacy
Education*
Equipment
Government Regulation
Societies*
Philately
Philosophy
Photography
Physical Medicine and Rehabilitation
Physiognomy
Physiology
Podiatry
Politics
Pollution use Sanitation
Portraits
Preventive Medicine
Primitive Medicine
Printing and Bibliography
Proctology use Gastroenterology and Digestive System
Psychiatry

*Indicates Subtopics which should always be ANDed with their Keyword.

**Terms in parentheses are older versions of the Keyword and should be ORed with the new term.

APPENDIX A (continued)

Psychology
Psychosomatic Medicine
Public Health
Quackery
Race
Radiology
Red Cross
Religion and Medicine
 Bible and Talmud
 Missions and Missionaries
 Religious Orders
 Saints
Research
Respiratory System
Resuscitation
Rural Health
Sanitation
School Health use Child Health;
 Education, Medical; Public Health
Science
Sex Behavior
Social Medicine
Social Welfare
Societies, Academies and
 Foundations; (or Societies)**
Specialization
Sport Medicine
State Medicine
Statistics and Demography

Surgery
 Abdominal
 Amputation
 Breast
 Cardiovascular
 Neurological
 Plastic
 Thoracic
 Tracheal
 Transplant
Symbolism and Heraldry
Terminology and Nomenclature
Therapeutic Cults
Therapeutics
Toxicology
Transport of Sick and Wounded
Travel
Tropical Medicine
Urology
Veterinary Medicine
Warfare; (or War)**
Witchcraft
Women in Medicine
Zoology use Animals; Biology;
 Parasitology

*Indicates Subtopics which should always be ANDed with their Keyword.

**Terms in parentheses are older versions of the Keyword and should be ORed with the new term.

22.6 APPENDIX B

List of searchable Keyword Subtopics (KS) allowed with the Keyword - DISEASES AND INJURIES.

Abdominal	Erysipelas
Abnormalities	Eye
Abscess	Fatigue
Adrenal Gland	Favism
Alcoholism	Fever
Altitude Sickness	Filariasis
Anemia	Food Poisoning
Anthrax	Foot and Mouth
Appendicitis	Fractures
Arthritis and Rheumatism	Gangrene
Asphyxia	Gigantism
Asthma	Goiter
Avitaminosis	Gonorrhea
Beriberi	Gout
Biliary Tract	Gynecologic
Bites and Stings	Hay Fever
Blood	Headache
Bone	Hearing Disorders
Botulism	Heart
Brucellosis	Helminthiasis
Burns	Hemophilia
Cancer <u>use</u> Neoplasms	Hemorrhage
Cataract	Hernia
Cerebrovascular	Herpes
Chest	Hookworm Infection
Chickenpox	Hypersensitivity
Cholera	Iatrogenic
Cleft Palate	Infectious
Clubfoot	Infectious Mononucleosis
Cretinism	Influenza
Cystic Fibrosis	Jaundice
Cysts	Kidney
Decompression Sickness	Laurence-Moon-Biedl Syndrome
Dengue	Leishmaniasis
Diabetes	Leprosy
Diarrhea	Leptospirosis
Digestive System	Leukemia
Diphtheria	Liver
Dislocations	Lymphatic
Drug Addiction	Malaria
Dwarfism	Marfan's Syndrome
Dysentery	Measles
Ear	Meningitis
Edema	Mental Disorders
Encephalitis	Mental Retardation
Endocrine	Metabolic
Epilepsy	Metabolism, Inborn Errors
Ergotism	Milk Sickness

APPENDIX B (continued)

Motion Sickness	Scurvy
Mumps	Sex Deviation
Musculoskeletal	Sex Disorders
Neoplasms	Shock
Nervous System	Sjogren's Syndrome
Obesity	Skin
Oral	Smallpox
Ornithosis	Speech Disorders
Parasitic	Splenic
Pellagra	Spontaneous Combustion
Plague	Sweating Sickness
Plant Poisoning	Syphilis
Pneumoconiosis	Tetanus
Pneumonia	Thymus
Poisoning	Thyroid
Poliomyelitis	Tonsillitis
Polyps	Toxoplasmosis
Porphyria	Treponemal Infections
Puerperal Infection	Trichinosis
Rabies	Trypanosomiasis
Radiation Injury	Tuberculosis
Rat-Bite Fever	Tularemia
Reiter's Disease	Typhoid
Relapsing Fever	Typhus
Respiratory Tract	Urinary Calculi
Rheumatic Fever	Urogenital System
Rickets	Vascular
Rocky Mountain Spotted Fever	Venereal
Rubella	Vision Disorders
Salmonella Infections	Waterhouse-Friderichsen Syndrome
Sarcoidosis	Whooping Cough
Scabies	Wound Infection
Scarlet Fever	Wounds and Injuries
Schistosomiasis	Yellow Fever
Scrofula	

22.7 APPENDIX C

List of searchable Keyword Subtopics (KS) allowed with the Keyword - DRUGS AND CHEMICALS.

Acids	Carline
Actinomycin	Catha Edulis
Aerosols	Centaurea Minora
Alcohol	Cephaloridene
Alkaloids	Cephalosporins
Allantoins	Chaulmoogra Oil
Aloe	Chicory
Amber	China-root
Aminobutyric Acid	Chloral Hydrate
Aminosalicylic Acid	Chlordiazepoxide
Ammonia	Chloroform
Ammonium Chloride	Chlorpromazine
Amphetamine	Cinchona
Amphotericin B	Clay
Amyl Nitrite	Cobweb
Angiotensin	Coca
Animal	Cocaine
Anthracenes	Cod Liver (Oil)
Antibiotics	Colchicum
Antimony	Collyrium
Antitubercular Agents	Condurango
Aphrodisiacs	Copper
Areca	Cortisone
Arnica	Cosmetics
Arsenic	Croton Oil
Arsphenamines	Curare
Artemesia	Cyclopropane
Asafetida	DDT
Aspirin	Diethylstilbestrol
Balsams	Digitalis
Basil	Digitoxin
Bear Grease	Diktamnon
Belladonna	Dimethyl Sulfoxide
Benzene Ring	DNA
Bezoars	Dopa
Bioflavonoids	Dover's Powder
Boric Acids	Enzymes
Calamus	Ephedra
Calcium	Ephedrine
Calomel	Ergot
Camphor	Erthromycin
Cannabis	Ether
Carbon	Ethylene
Carbon Monoxide	Eugenol
Cardiac Glycosides	Eupatorium

APPENDIX C (continued)

Fatty Acids
Flax
Fluidglycerates
Fluorides
Fluorine
Fungicides
Galbanum
Garlic
Gastrin
Ginseng
Glonoin
Glycogen
Gold
Gossypium
Guaiac
Gutta-Percha
Hallucinogens
Halothane
Hellebore
Hemlock
Hemp
Heparin
Heroin
Histamine
Hormones
Insulin
Iodine
Ipecac
Iron
Lactic Acid
Lead
Lithium
Lotus
LSD
Magnesium Carbonate
Mandragora
Manna
Melissa
Mentha
Mercury
Mescaline
Methadone
Mistletoe
Moly
Morphine
Moxa
Mushrooms
Musk
Mussels
Nightshade
Nitrous Oxide
Nucleic Acid
Nux Vomica
Oak
Oils
Olem de Lateribus
Opium
Orchids
Oxygen
Paliurus
Penicillin
Perfume
Pesticides
Petroleum
Petroselinum
Phenol
Phosphorus
Physostigmine
Pilocarpine
Pine Resins
Plant
Plantain
Polygonum
Potassium Nitrate
Precious Stones
Procaine
Prostaglandins
Proteins
Prunella
Pulvis Fumalis
Quinacrine
Quinine
Quinolines
Rauwolfia
Resins
Rhubarb
Rifomycin
Rosemary
Rue
Saccharin
Sal Ammoniac
Salep
Salts
Silphium
Silver Nitrate
Sisymbrium
Snuff
Sodium Chloride
Squill
Steroids
Stones
Streptomycin
Strontium
Strophantid
Strychnine
Sugar

APPENDIX C (continued)

Sulfonamides	Toad
Sulfur	Tobacco
Sunflower	Tormentil
Tar Water	Tuberculin
Tartrates	Tubocurarine
Tea	Turpentine
Thalidomide	Urobilinoids
Theophylline	Valerian
Theriac	Viola Tricolor
Thiacetazone	Vitamins
Thorium Dioxide	Vitiligo
Thyme	Yeast
Thyroxine	Zinc

HISTLINE

22.8 APPENDIX D

List of searchable Time Periods (TP).

Before 500 A.D.

500 A.D.-1450

1450-1700

1700 to Present

Multiperiod

22.9 APPENDIX E

List of searchable Geographic Areas (CY)

Afghanistan	Germany
Africa	Ghana
Algeria	Great Britain
Americas	Greco-Roman
Angola	Greece
Arabic	Guatemala
Argentina	Guyana <u>see also</u> British
Armenia	Guiana
Ascension Island	Haiti
Asia	Hawaii
Assyria	Honduras
Australia	Hong Kong
Austria	Hungary
Babylon	Iceland
Barbados	India
Belgium	Indonesia
Benelux	Iran
Bolivia	Iraq
Brazil	Ireland
British Guiana <u>see also</u> Guyana	Israel
Bulgaria	Italy
Burma	Ivory Coast
Byzantium	Jamaica
Cambodia	Japan
Cameroons	Jordan
Canada	Kenya
Caribbean	Korea
Ceylon <u>use</u> Sri Lanka	Kuwait
Chile	Laos
China <u>see also</u> Tibet	Lebanon
Colombia	Liberia
Congo	Luxembourg
Congo (Brazzaville) <u>see also</u> People's Republic of the Congo	Malagasy Republic
Costa Rica	Malawi
Cuba	Malaysia
Czechoslovakia	Mali
Denmark	Malta
Dominican Republic	Martinique
Dutch Guiana	Mauritius
Ecuador	Mesopotamia
Egypt <u>see also</u> United Arab Republic	Mexico
England <u>use</u> Great Britain	Middle East
Ethiopia	Mongolia
Europe	Morocco
Finland	Multinational
France	Nepal
Gabon	Netherlands
	Netherlands Antilles

APPENDIX E (continued)

New Guinea
New Zealand
Nicaragua
Nigeria
North America
Norway
Pacific Islands
Pakistan
Panama
Paraguay
People's Republic of the Congo
 see also Congo (Brazzaville)
Peru
Philippines
Poland
Polynesia
Portugal
Puerto Rico
Rhodesia
Rome
Rumania
Rwanda
Scandinavia
Senegal
Sierra Leone
Singapore
South Africa
South America
South-East Asia
Spain
Sri Lanka
Sudan
Sumer
Sweden
Switzerland
Syria see also United
 Arabic Republic
Tanzania
Thailand
Tibet see also China
Trinidad
Tunisia
Turkey
Uganda
Union of South Africa
United Arab Republic
 see also Egypt
 see also Syria
United States
Uruguay
USSR
Vatican
Venezuela
Vietnam
West Africa
West Indies
Western Samoa
Yugoslavia
Zaire
Zambia

NLM TECHNICAL BULLETIN - OCT 78

HEALTH PLANNING AND ADMINISTRATION DATA BASE

Clifford A. Bachrach, M.D.
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In response to a growing need, NLM has developed a new online citation data base, to be devoted to literature about health care planning, organization, financing, management, manpower, and related subjects. This will be known as the Health Planning and Administration Data Base, or "file Health," for short and will be available to U.S. centers on or about November 1, 1978. Please note that while the searching concepts and the print formats for the Health file are the same as in MEDLINE, some of the mnemonics for data elements have changed. (See the Health file unit record for the new mnemonics.) Initially, the file will contain relevant citations from MEDLINE journals, citations from supplementary journals selected for their emphasis on health care matters, and citations from journals selected for their value for the Hospital Literature Index.

The starting data base will contain about 95,000 citations indexed since January 1975 and may grow at a rate of 25,000 per year. As early as possible, we shall add citations from two additional sources.

The first of these will be citations to non-serial items, - that is books, technical reports, and so forth, from our own CATLINE file of NLM acquisitions.

The other step will be the inclusion of citations to be furnished by the National Health Planning Information Center (NHPIC) of the Health Resources Administration of the Department of Health, Education and Welfare. This literature is now cited in the Health Planning Series of the Weekly Government Abstracts published by the National Technical Information Service. The NHPIC component will include serial articles, books, and technical reports, some of which are available only through N.T.I.S.

The inclusion of materials from these sources awaits the modification of our computer records and programs to permit combining serial and non-serial citations in a single data base, - and the capability of converting NHPIC records which differ in bibliographic format from the NLM records.

Users of the new data base will encounter many unfamiliar serial titles, but there is a SERLINE record for each of them. Some are out-of-scope journals that contain relevant articles. The SERLINE record for each of these contains a note indicating that this title is not available from NLM. Possible sources of interlibrary loans will be suggested later.

In constructing this data base, we recognize that there can be no clear cut separation of the clinical from the administrative aspects of medicine. Many articles that are primarily clinical do make explicit reference to health care matters, and thus merit the assignment of one or more health care subject headings which qualify them for retrieval from MEDLINE for the new data base. It seems desirable, at least initially, to err in the direction of including marginal material rather than to pre-judge the limits of the interests of users of the new data base. By so doing we hope to minimize the occasions when a search of both data bases is necessary. We hope that, as users become familiar with the Health Planning and Administration data base, they will favor us with their comments and criticisms concerning scope, lit-

PART 23
HEALTH PLANNING AND ADMINISTRATION

23.1 INTRODUCTION

The Health Planning and Administration (HEALTH) file is an online bibliographic data base containing citations to the literature dealing with the non-clinical aspects of health care delivery.

23.2 SCOPE AND CONTENT OF HEALTH

Subject areas emphasized in this file include health care planning and facilities, health insurance, and the aspects of financial management, personnel administration, manpower planning and licensure and accreditation which apply to the delivery of health care. The HEALTH file currently consists of citations taken from MEDLINE and citations to articles from certain non-Index Medicus journals. In cooperation with NLM, the American Hospital Association produces the Hospital Literature Index from the HEALTH file. Plans are being made to include some additional items from both CATLINE and the National Health Planning Information Center (NHPIC) of the Health Resources Administration (HRA). The NHPIC citations currently appear in the Health Planning Series of the Weekly Government Abstracts.

The file contains about 100,000 citations to material published from 1975 to the present. It is planned that the HEALTH file will be updated monthly with about 2000 citations. The file structure and search capabilities are almost identical to MEDLINE.

23.3 ENTERING THE HEALTH FILE

To access the HEALTH file, login to ELHILL at NLM in the usual way and enter the command FILE HEALTH or FILE HEALTH PLANNING & ADMIN after any USER: cue.

23.4 HEALTH FILE UNIT RECORD

The HEALTH unit record is the computerized information representing one article or monograph. The table following lists the data elements with their two-letter category qualifiers:

Category Qualifier	Element Name	Search Status	PRINT	PRINT FULL	PRINT DETAILED
AA	Abstract Author	*			X
AB	Abstract	TW			X
AU	Author	*	X	X	X
CA	Call Number	*			X
CI	Citation Identifier			X	X
DA	Date of Entry	*R			X
DP	Date of Publication	*			X
EA	English Abstract Indicator				X
EM	Entry Month	*			X
IN	In Statement/Title				X
	Abbreviation	*			X
IP	Issue/Part/Supplement				X
IS	International Standard				X
	Serial No.	*			X
JC	Journal Title Code	*			X
LA	Language	*		X	X
LI	Special List Indicator	*			X
LR	Last Revision Date	*			X
MH	MeSH Headings	*		X	X
MN	MeSH Class Number	*			X
MR	Major Revision Date				X
NI	No-Author Indicator				X
PG	Pagination				X
PS	Personal Name as Subject	*			X
RF	Number of References				X
RI	Revision Indicator				X
SB	Journal Subset	*			X
SH	Subheadings	*		X	X
SO	Source		X	X	X
TI	Title	TW	X	X	X
TT	Transliterated/Vernacular Title				X
TW	Text Words	TW			
UI	Unique Identifier	*R			X
VI	Volume/Issue				X
YR	Year	*			
ZN	MeSH Z Tree Number	*			X

* = Directly Searchable

R = Rangeable

TW = Text Word Searchable

The following is a sample PRINT DETAILED unit record:

AU - MIMS RB; THOMAS LL; CONROY MV
TI - PHYSICIAN HOUSE CALLS: A COMPLEMENT TO HOSPITAL-BASED MEDICAL CARE
LA - ENG
MH - ADOLESCENCE; ADULT; AGE FACTORS; AGED; CALIFORNIA;
MH - CONTINUITY OF PATIENT CARE; COSTS AND COST ANALYSIS;
MH - FEMALE; *HOME CARE SERVICES; *HOUSE CALLS; HUMAN;
MH - MALE; MIDDLE AGE; QUALITY OF HEALTH CARE; SEX FACTORS
DA - 770226
DP - JAN 77
IS - 0002-8614
IN - J AM GERIATR SOC
UI - 77072129
PG - 28-34
SB - M
ZN - Z1.107.567.875
IP - 1
VI - 25
JC - H6V
AA - AUTHOR
EM - 7704
AB - A PHYSICIAN-ORIENTED, HOSPITAL-BASED HOME CARE PROGRAM (HCP) IS DESCRIBED. THE STAFF INCLUDES A DIRECTOR, RESIDENT PHYSICIANS, NURSES, SOCIAL WORKERS, AND CLERICAL PERSONNEL. HOUSE CALLS ARE MADE BY RESIDENT PHYSICIANS DURING OFF-DUTY HOURS, BUT PATIENTS, THEIR FAMILIES, AND OTHER HEALTH PROFESSIONALS MAY HELP WITH THEIR CARE. DRUGS, EQUIPMENT AND SUPPLIES ARE AVAILABLE THROUGH THE HOSPITAL AND CONTRACT VENDORS. THE MOST COMMON MEDICAL DISEASES ARE CARDIAC AND CEREBROVASCULAR DISORDERS, ARTHRITIS, DIABETES MELLITUS, CHRONIC PULMONARY DISORDERS AND HYPERTENSION. OF 513 PATIENTS EVALUATED IN ONE YEAR, 337 WERE ADMITTED TO THE HCP. TWO-THIRDS WERE WOMEN. AGES RANGED FROM 18 TO 106 (MEDIAN, 68 YEARS). UNDER THE HCP THERE WAS SIGNIFICANT IMPROVEMENT AND CONTROL OF MEDICAL PROBLEMS, AND A DECREASE IN HOSPITAL AND EMERGENCY ROOM ADMISSIONS, AND CLINIC VISITS; 207 OF THE 337 PATIENTS WERE DISCHARGED. THE HCP COST LESS THAN OTHER OUTPATIENT AND INPATIENT SERVICES. IT PROVED TO BE A REWARDING, ECONOMICAL AND EFFECTIVE MEANS OF IMPROVING MEDICAL CARE FOR A METROPOLITAN POPULATION DEPENDENT UPON HOSPITAL-BASED PHYSICIANS FOR MEDICAL SERVICES.
CI - 0002-8614 25:28 77
SO - J AM GERIATR SOC 25(1):28-34, JAN 77

The following is a description of each of the data elements in the unit record. It should be remembered that not all of the data elements listed are present in every record. When a particular data element is missing from a unit record, its category qualifier will not be displayed in a PRINT command.

23.4.1 ABSTRACT AUTHOR (AA)

At present, all items which have abstracts included in their unit records also have the word AUTHOR entered into this element. This means that the author of the item was also the author of the abstract, which was published along with the item itself. This field is directly searchable, and may be used to limit retrieval to those items having abstracts online.

23.4.2 ABSTRACT (AB)

Abstracts (which include summaries but not conclusions) are added to the unit record if they were published with the item and if the publisher has given the National Library of Medicine permission to make the abstract available online. If an item did not have a published abstract, NLM does not create one. Significant words from abstracts can be searched as Text Words (TW) unless they appear on the Stopword list (Section 4.14). All abstracts are written in English. If a foreign language item was published with an English abstract, the term ENGLISH ABSTRACT is added to the MeSH Headings (MH) field of the unit record, although the abstract itself may not be available online.

23.4.3 AUTHOR (AU)

The name of each author of every item is included in this field of the unit record. Authors' names are entered last name first, space, followed by one or two initials, space, and, if applicable, the designation JR, SR, I, II, etc.:

AU - CONROY MV

Any letter of an author's name which is modified by a diacritical mark in the original language will be printed online with a colon(:) immediately preceding it, e.g.:

AU - R:UDEL G

However, when entering authors' names for searching, all diacritical marks should be omitted. The above author's name would be searched as RUDEL G.

In offline output, the authors' names will be printed with the correct diacritical mark preceding the letter to which it applies:

AU - R:UDEL G

The truncation symbol (:) and/or the single variable character symbol (#) should be used when there is uncertainty about some portion of an author's name. For example, if it is not known whether the name is SMITH or SMYTH, enter SM#TH. When the initials are not known, enter the surname followed by a space and colon:

TRIMBLE :

If only one initial is known, the single variable character symbol should be used:

SOLOMON H#

or, to include the possibility of further notations, such as JR, the colon might be used:

SOLOMON H:

23.4.4 CALL NUMBER (CA)

This data element contains the NLM call number for a monograph. This number is directly searchable and printable. Although there are no monographs in the HEALTH file at present, this element will be used when the NHPIC and CATLINE material is input.

23.4.5 CITATION IDENTIFIER (CI)

This is a unique number assigned to a citation as it is input to the file. It is a composite, derived from:

- 1) the International Standard Serial Number (ISSN)
- 2) the volume number
- 3) the number of the first page of the item
- 4) a two-digit year of publication

For example:

CI - 0002-8614 25:28 77

23.4.6 DATE OF ENTRY (DA)

This is a six-digit number in the form YYMMDD (YearMonthDAY) indicating the date when a citation was input to the file. October 4, 1978 would appear as 781004. The entry date is not identical to the Date of Publication, the Year, or the Entry Month.

Entry dates can be searched alone:

SS 4 /C?
USER:
781128 (DA)
PROG:
SS (4) PSTG (1558)

or may be ranged. When ranging, a subset of retrieved citations is combined with the desired range:

SS 5 /C?
USER:
HOSPICES AND FROM 780101 TO 790101 (DA)
SS (5) PSTG (62)

23.4.7 DATE OF PUBLICATION (DP)

The full date on which the item was published appears in this data element, exactly as it was found on the item. Thus, the format of this field varies:

DP - MAR 76
DP - 8 AUG 78
DP - 1979

This element is one of those used to compose the Source (S0) field.

23.4.8 ENGLISH ABSTRACT INDICATOR (EA)

Foreign language items published with a substantive English abstract will carry the letter A in this field, whether or not the abstract is available online. This element is not directly searchable. An item marked with this indicator will also have ENGLISH ABSTRACT in the MeSH Heading field, which is directly searchable.

23.4.9 ENTRY MONTH (EM)

The Entry Month is a four-digit number in the format YYMM (YearMonth) indicating the update in which a citation was input to the file. This EM value is the same for all citations input in a given monthly update, whether they came from MEDLINE or from another source.

SS 1 /C?
USER:
7811 (EM)
PROG:
SS (1) PSTG (3360)

Note that if a citation has come from MEDLINE for inclusion in HEALTH, its HEALTH EM will be the same as its MEDLINE IM (Index Medicus tag) date. The HEALTH file became available in November, 1978, but there are EM dates prior to 7811 in the file because of its retrospective coverage.

USER:
7811 (EM)
PROG:
SS (1) PSTG (3360)

23.4.10 IN STATEMENT/TITLE ABBREVIATION (IN)

There are two different formats for this data element, one for journal articles and one for monographs. Journal articles have only their Journal Title Abbreviation, derived according to the International Code for the Abbreviation of Titles of Periodicals, in this field. Full titles may be found in the SERLINE file.

Monographs have an IN: statement in this data element, consisting of the title, edition, and authorship information:

IN - COOK AW, ED. SOURCES OF FUNDS FOR HEALTH CARE ORGANIZATIONS.

23.4.11 ISSUE/PART/SUPPLEMENT (IP)

This data element identifies the issue, part or supplement of the journal in which the item was published. For example, the IP field for volume 1 issue no. 8033 of Lancet will be printed as:

IP - 8033

This element is one of those used to compose the Source (SO) field.

23.4.12 INTERNATIONAL STANDARD SERIAL NUMBER (IS)

The ISSN for a journal is directly searchable. This data element is always a nine character string consisting of two sets of four digits linked by a hyphen. The Journal Title Code (JC) and In Statement (IN) may also be used to limit retrieval to certain journals.

Warning: Articles input to the file before an ISSN was assigned to the journal in which they were published will not be retrieved when the ISSN is used for searching.

A listing of journal ISSNs may be found using SERLINE or the List of Journals Indexed in Index Medicus (LJI).

23.4.13 JOURNAL TITLE CODE (JC)

Journals indexed for MEDLINE have a unique three-character code. These codes are directly searchable and may be used to limit retrieval

to certain journals. For example, one may limit a search for citations to articles dealing with medical records to those which were published in the Journal of the American Medical Association:

SS 2 /C?
USER:
EXP RECORDS
PROG:
SS (2) PSTG (3333)

SS 3 /C?
USER:
2 AND KFR (JC)
PROG:
SS (3) PSTG (46)

The Journal Title Code may be found using the SERLINE file.

23.4.14 LANGUAGE (LA)

There is a three-character abbreviation in this field for each item, indicating the language in which it was written. The abbreviations are directly searchable:

SS 5 /C?
USER:
POISON CONTROL CENTERS AND GER (LA)
PROG:
SS (5) PSTG (4)

The abbreviation FOR has also been added to the unit record for each non-English language item, and retrieval may be limited to English language items using the AND NOT operator:

SS 7 /C?
USER:
POISON CONTROL CENTERS AND NOT FOR (LA)
PROG:
SS (7) PSTG (77)

English language items make up about 87% of the HEALTH file.

23.4.15 SPECIAL LIST INDICATOR (LI)

The Special List Indicators identify items indexed from non-Index Medicus journals. Six special lists are included:

- C - Items in the field of communication disorders
- D - Items in the field of dentistry
- F - Items from foreign journals not indexed for Index Medicus
- H - Items in the HEALTH file which do not appear in the MEDLINE file
- N - Items in the field of nursing
- R - Items in the field of population science

23.4.16 LAST REVISION DATE (LR)

If any changes were made to the unit record after it was input to the file, the revision date appears in this data element in the format YYMMDD (YearMonthDay). This element should not be confused with the Major Revision Date (MR).

23.4.17 MeSH HEADINGS (MH)

These are indexing terms from the published Medical Subject Headings (MeSH) thesaurus. They should be entered for searching exactly as they appear in the printed listing with regard to punctuation, spacing, etc. MeSH Headings may be used alone or in combination with Subheadings (SH). In addition, the initial asterisk (*) may be used with MeSH Headings to retrieve items in which the heading used was a main point of the item. For more information about searching with MeSH Headings, see PART 6.

23.4.18 MeSH CLASS NUMBER (MN)

This alpha-numeric string indicates the position of a given MeSH term in the hierarchical structure of terms, referred to as the MeSH Tree Structures. These strings are directly searchable and are primarily used with the EXPLODE search capability (see Section 4.5.5.4). The MeSH Class Number for any MeSH term may be displayed online using the MESHNO or TREE commands:

SS 3 /C?
USER:
MESHNO DIETARY SERVICES
PROG:

DIETARY SERVICES
N2.421.242

SS 3 /C?
USER:
TREE DIETARY SERVICES
PROG:

HEALTH SERVICES N2.421
DIETARY SERVICES N2.421.242
FOOD SERVICE, HOSPITAL N2.421.242.472 (*)

SS 3 /C?

USER:

N2.421.242.

PROG:

SS (3) PSTG (76)

(Use of a final period or the qualifier
(MH) is necessary when searching with
MeSH Class Numbers)

23.4.19 MAJOR REVISION DATE (MR)

This data element contains the date of the last revision of the unit record significant enough to require republishing the citation. The six-digit string is in the format YYMMDD (YearMonthDay).

23.4.20 NO-AUTHOR INDICATOR (NI)

If the item was judged, according to standard indexing rules, to have been written anonymously, an A appears in this data element. This field is printable but not directly searchable. An item having this indicator will have no authors' names listed in the unit record, and therefore no AU field:

USER:

PRINT 1 INCLUDE N1

PROG:

1

TI - FIFTH ANNUAL GUIDE TO FINDING THE RIGHT POSITION; 1975.

NI - A

SO - RN 37(12):SUPPL:61-7, DEC 74

23.4.21 PAGINATION (PG)

This data element indicates the inclusive pages of the article in a journal. This is one of the elements used to compose the Source (SO) field. Print format:

PG - 553-7

23.4.22 PERSONAL NAME AS SUBJECT (PS)

When an item contains a biographical note or obituary, or is entirely about the life or work of an individual or group of persons, the name(s) of the person(s) so discussed will appear in this data element. These names may be searched directly in the same form as those in the AU data element, i.e., last name, space, two initials, space, JR, SR, I, II, as appropriate. The name must be qualified with (PS):

SS 5 /C?
USER:
KENNEDY EM (PS)
PROG:
SS (5) PSTG (2)

SS 6 /C?
USER:
PRINT 1 INCLUDE PS
PROG:

1
AU - LESPARRE M
TI - AN INTERVIEW WITH SEN. EDWARD M. KENNEDY (D-MA).
PS - KENNEDY EM
SO - HOSPITALS 51(16):57-60, 16 AUG 77

23.4.23 NUMBER OF REFERENCES (RF)

If an item is judged to be a review of the literature, the number of references cited in the item is included in this data element. All such items will also have the word REVIEW in the MeSH Heading (MH) field of their unit record.

23.4.24 JOURNAL SUBSET (SB)

This data element contains one-letter tags indicating subgroups of journal titles:

A - Journals included in the Abridged Index Medicus (AIM)
M - Journals which originally comprised the entire MEDLINE
data base

These tags are directly searchable.

23.4.25 REVISION INDICATOR (RI)

If a record has undergone major revision (sufficient to require republishing), an indicator is entered in this data element:

RI - (REV.)

The Major Revision Date (MR) element shows the date of this revision.

23.4.26 SUBHEADINGS (SH)

Although subheadings are always assigned in combination with MeSH headings, they may be searched in combination or alone.

23.4.26.1 SEARCHING SUBHEADINGS

1) In combination:

- a) attached to one MeSH Heading, using a slash:**

MOBILE HEALTH UNITS/ECONOMICS

- b) attached to more than one MeSH Heading, using SUBHEADINGS APPLY:**

SS 9 /C?

USER:

SUBHEADINGS APPLY ECONOMICS, MANPOWER, TRENDS

PROG:

SUBHEADINGS ACCEPTED

SS 9 /C?

USER:

EXPLODE MENTAL HEALTH SERVICES

PROG:

SS (9) PSTG (200)

2) Alone: enter the subheading (using the two-letter abbreviation) with the qualifier (SH):

SS 10 /C?

USER:

9 AND EC (SH)

PROG:

SS (9) PSTG (5)

(Entering the entire subheadings qualified with (SH) will generate a NO POSTINGS message)

This use of the subheading will retrieve all records having that subheading attached to any MeSH Heading in the record. Several subheadings may be ORed together using this method.

For more information about subheadings, see PART 6.

23.4.26.2 PRINTING SUBHEADINGS

Subheadings are printed only in combination with MeSH Headings. Thus, PRINT MH will produce a list of both. When MeSH Headings and their attached subheadings are printed out, two misleading print formats are used, which are invalid for searching:

1) Subheadings are concatenated behind their MeSH Headings:

MH - HEALTH SERVICES/ECONOMICS/UTILIZATION

but can only be searched when attached one at a time:

USER:

HEALTH SERVICES/ECONOMICS OR HEALTH SERVICES/UTILIZATION

2) Asterisks are printed between MeSH Headings and their subheadings:

MH - HYDRAMNIOS/*OCCURENCE

but can only be searched preceding the MeSH Heading:

USER:

*HYDRAMNIOS/OCCURENCE

23.4.27 SOURCE (SO)

This is a composite field for journal articles, made up of:

- 1) the In Statement/Journal Title Abbreviation field
- 2) the Volume/Issue field
- 3) the Issue/Part/Supplement field
- 4) the Pagination field
- 5) the Date of Publication field

Example:

SO - N ENGL J MED 294(4):235-6, 22 JAN 76

Because the Source field is system-composed, it cannot be searched either directly or by stringsearching.

23.4.28 TITLE (TI)

This data element contains the title of the item. Each separate word in the title may be searched as a Text Word unless it appears on the Stopword List (Section 4.14). Titles enclosed in brackets are translations of foreign language titles.

23.4.29 TRANSLITERATED/VERNACULAR TITLE (TT)

If the language in which an item was written does not use the Roman alphabet, the Roman-transliterated title will appear in this data element. In other non-English language items, this element will contain the title as it appears on the original piece:

SS 8 /C?

USER:

TOBACCO AND GER (LA)

SS (8) PSTG (5)

SS 9 /C?

USER:

PRINT 1 TI, TT

PROG:

1

TI - [AIR POLLUTION DUE TO TOBACCO SMOKE IN RESTAURANTS]

TT - LUFTVERUNREINIGUNG DURCH TABAKRAUCH IN GASTST:ATTEN.

23.4.30 TEXT WORDS (TW)

Any word that has been accepted as a Text Word from the title or abstract data elements (see the Text Word Term Generation portion of PART 4) is searchable using the (TW) qualifier. Text Words are always single words.

23.4.31 UNIQUE IDENTIFIER (UI)

The Unique Identifier is a sequential accession number assigned to each citation entered into the file. However, if a citation has come from MEDLINE, it retains its MEDLINE accession number. This identifier is directly searchable and rangeable.

23.4.32 VOLUME/ISSUE (VI)

The Volume/Issue data element identifies the volume of the journal in which the article was published. This information also appears as the second part of the Source (SO) field. See also the Issue/Part/Supplement data element.

23.4.33 YEAR (YR)

The last 2 digits of the year in which the article was published are entered in this field. These dates are directly searchable and can be combined with other searchable elements to restrict retrieval to items published in a given year. For example:

SS 1 /C?

USER:

HALFWAY HOUSES AND 78 (YR)

SS (1) PSTG (15)

The year of publication cannot be searched using the ranging capability. If a range of years is desired, the individual years must be entered separately:

SS 16 /C?

USER:

HALFWAY HOUSES AND 78 (YR)

SS (16) PSTG (15)

SS 17 /C?
USER:
HALFWAY HOUSES AND 77 (YR)
SS (17) PSTG (30)

SS 18 /C?
USER:
16 or 17
PROG:
SS (18) PSTG (45)

23.4.34 MESH Z TREE NUMBER (ZN)

This alpha-numeric string is the MeSH Classification number of the place of publication of the item. This string may be searched alone:

SS 11 /C?
USER:
Z1.107.567.875.858. (ZN) (When used alone, the final period and qualifier (ZN) must be used)
PROG:
SS (11) PSTG (3)

or with the EXPLODE instruction:

SS 15 /C?
USER:
EXPLODE Z1.107.567.875: (ZN) (When used with EXPLODE, a final colon and the qualifier (ZN) must be used)
PROG:
SS (15) PSTG (58,177)

The MeSH Tree Number for any place in the list may be displayed online with the MESHNO command.

23.5 HEALTH PRINT COMMANDS

There are three standard PRINT formats for this file, listed below with the data elements displayed by each:

1) PRINT or PRT

AU - AUTHOR
TI - TITLE
SO - SOURCE

2) PRINT FULL or PRT FU

AU - AUTHOR
TI - TITLE
LA - LANGUAGE

MH - MESH HEADINGS
SO - SOURCE
CI - CITATION IDENTIFIER

3) PRINT DETAILED or PRT DL

AU - AUTHOR
TI - TITLE
DA - DATE OF ENTRY
IS - ISSN
LA - LANGUAGE
MH - MESH HEADINGS
DP - DATE OF PUBLICATION
LI - SPECIAL LIST INDICATOR
SO - SOURCE
CI - CITATION IDENTIFIER
AB - ABSTRACT
AA - ABSTRACT AUTHOR
JC - JOURNAL TITLE CODE
IN - IN STATEMENT/TITLE ABBREV.
EM - ENTRY MONTH

CA - CALL NUMBER
PS - PERSONAL NAME AS SUBJECT
EA - ENGLISH ABSTRACT INDICATOR
JI - JOURNAL ARTICLE IDENTIFIER
LR - LAST REVISION DATE
SB - JOURNAL SUBSET
MR - MAJOR REVISION DATE
IP - ISSUE/PART/SUPPLEMENT
NI - NO-AUTHOR INDICATOR
RF - NUMBER OF REFERENCES
PG - PAGINATION
RI - REVISION INDICATOR
TT - TRANSLITERATED/VERNACULAR TITLE
VI - VOLUME/ISSUE
UI - UNIQUE IDENTIFIER

ZN - MESH Z TREE NUMBER

All PRINT commands will automatically display 25 lines plus the number of lines needed to complete the citation being printed at the 25th line. The first 25+ lines will be followed by a CONTINUE PRINTING? (YES/NO) question. Answering YES to each of these questions will cause all the requested citations to be printed out in increments of 25+ lines.

Tailored PRINT commands, those in which the searcher selects the elements to be printed out, may be constructed according to the principles set forth in Section 4.9.15.4.

23.6 SPECIAL FEATURES OF SEARCHING THE HEALTH FILE

This file has the same structure and searching capabilities as MEDLINE. However, HEALTH contains different category qualifiers from those used in MEDLINE for similar data elements. This is because the HEALTH file is the first to be constructed in accordance with the National Library of Medicine's new unit record standardization policy. It is important to remember the differences in qualifiers when searching both files; for example, in MEDLINE the Journal Title Abbreviation is found in the TA field, but in the HEALTH file it is in the IN field. The table below lists qualifiers which differ between the two files:

HEALTH

AA - ABSTRACT AUTHOR
DA - DATE OF ENTRY
DP - DATE OF PUBLICATION
EM - ENTRY MONTH
IN - IN STATEMENT/TITLE ABBREV.
LR - LAST REVISION DATE
MN - MESH CLASSIFICATION NUMBER
MR - MAJOR REVISION DATE
NI - NO-AUTHOR INDICATOR
PS - PERSONAL NAME AS SUBJECT
RF - NUMBER OF REFERENCES
UI - UNIQUE IDENTIFIER
YR - YEAR
ZN - MESH Z TREE NUMBER

MEDLINE

AS - ABSTRACT SOURCE
ED - ENTRY DATE
PD - PUBLICATION DATE
IM - INDEX MEDICUS MONTH
TA - JOURNAL TITLE ABBREVIATION
VD - REVISION DATE
MC - MESH CLASSIFICATION NUMBER
LV - LAST MAJOR REVISION
NA - NO-AUTHOR INDICATOR
SU - SUBJECT NAME
NR - NUMBER OF REFERENCES
CN - CITATION NUMBER
YP - YEAR OF PUBLICATION
PN - PLACE OF PUBLICATION NUMBER

To eliminate overlap between the MEDLINE and HEALTH files, use the same search terms in each file, then combine your HEALTH file retrieval with the H Special List Indicator:

SS 12 /C?
USER:
11 AND H (LI)
PROG:
SS (12) PSTG (145)

The result is the set of HEALTH citations which do not appear in MEDLINE.

DIRLINE Replacement Pages

Attached are revised pages for the DIRLINE chapter mailed with the December 1983 issue of the NLM Technical Bulletin. See the February 1984 Technical Bulletin article for special instructions for searching the Country/State (CY) field.

<u>PAGE NUMBER</u>	<u>REVISED SECTION</u>	<u>CHANGE</u>
Unnumbered	26.4	AD field in sample record.
Unnumbered	26.4.2	AD field in sample search.
Unnumbered	26.4.3	Instructions for searching CY field.
Unnumbered	26.4.11	AD field in sample search.
Unnumbered	26.7	Appendix A, USPS two-letter state abbreviations.

The following is a sample PRINT DETAILED COMPRESSED unit record for a record in DIRLINE.

SI - NRC/69/000812
NA - OHIO STATE UNIVERSITY ; VETERINARY MEDICINE LIBRARY
AD - OHIO STATE UNIVERSITY, 229 SISSON HALL, 1900 COFFEY RD.,
COLUMBUS, OH 43210 TEL. (614) 422-6107
CY - OHIO (OH)
ZP - 43210
AB - INTERESTS: VETERINARY ANATOMY, PHYSIOLOGY, PHARMACOLOGY,
PARASITOLOGY, MEDICINE AND PREVENTIVE MEDICINE, SURGERY, AND
RADIOLOGY. HOLDINGS: 35,000 BOOKS AND JOURNALS; 419 PERIODICAL
TITLES; VERTICAL FILE COLLECTION OF PAMPHLETS AND OTHER
MATERIALS. FOREIGN SOURCE MATERIALS ARE IN RUSSIAN, ITALIAN,
SPANISH, FRENCH, AND GERMAN. THE LIBRARY ALSO HAS ACCESS TO
VARIOUS COMPUTERIZED DATABASES, INCLUDING MEDLINE, DIALOG,
ISI, OCLC, ETC. INFO SERVICES: PROVIDES REFERENCE SERVICES;
PROVIDES DUPLICATION SERVICES FOR FEE; PERMITS ONSITE USE OF
COLLECTIONS; MAKES INTERLIBRARY LOANS. SERVICES ARE PRIMARILY
FOR UNIVERSITY PERSONNEL, BUT OTHERS ARE SERVED AS TIME PERMITS.
GN - FACILITIES: FACILITIES INCLUDE 1 MICROFICHE, 1 MICROFILM, AND 1
MICROCARD READER, 1 MICROFICHE READER-PRINTER, AND 1
PITNEY-BOWES COIN COPIER.
KW - PARASITOLOGY ; VETERINARY DRUGS ; DISEASE VECTORS ; ZOONOSES ;
VETERINARY MEDICINE ; MICROBIOLOGY
NT - UNIVERSITY ; SPECIAL LIBRARY
EM - 8208

The following (in alphabetical order by the category qualifier) is a description of each of the data elements in the unit record.

26.4.1 Abstract (AB)

Information in the Abstract (AB) field is divided into sections labelled Introduction, Interests, Holdings, Publications, and Information Services (abbreviated as Info Services). Abstracts occur in all records in the NRC database, but all of the sections do not occur in every record. Definitions for the sections in the Abstract field are:

INTRODUCTION - Statement used to describe the mission or sponsorship of an organization. It is optional, and is used to convey some unusual aspect or to clarify ensuing information in the NRC record.

INTERESTS - Brief summary of the organization's overall interests.

HOLDINGS - Describes the scope and approximate size of a library collection, special information file, museum collection, and databases, including remote databases to which the organization has access.

PUBLICATIONS - Lists publications that are compiled by or issued by the organization being described. Actual titles and frequency of periodicals for which the organization is responsible for producing are listed.

INFO SERVICES - Describes the services provided to outside organizations or persons. Limitations, restrictions, or special conditions affecting the service are noted in this statement.

Significant words within the Abstract field can be searched as Text Words (see Section 26.5.2, Text Word Searching), unless they appear on the Stopword List (Section 4.4). This field is printable and can also be searched using the STRINGSEARCH capability. (Please see Section 4.6.4 of this Manual for instructions in this technique.)

26.4.2 ADDRESS (AD)

This field contains the mailing address, and location if they differ, of the organization. This is a repeating field, and may also be used to list two or more main locations of an organization. Telephone numbers, if available, may be listed here. The Address field is printable but it is not directly searchable. It can be searched using the STRINGSEARCH capability. (Section 4.6.4).

A sample of the Address is:

AD - Massachusetts General Hospital, Boston, MA 02114 TEL. (617) 726-2821

26.4.3 COUNTRY/STATE (CY)

This field provides the name of the state or, if a foreign country, the name of the country as contained in the first occurrence of the Address field. State names have been abbreviated according to the United States Postal Service (USPS) two-letter codes (see Appendix A for list of state abbreviations). There is no collective designation for United States. This field is directly searchable and printable. It is advisable to use the NEIGHBOR command to find the exact form(s) of the country for non-U.S. organizations. For example, England can be searched variously as Great Britain, United Kingdom, etc.

SS 2 /C?

USER:

1 AND FL (CY)

PROG:

SS (2) PSTG (67)

SS 3 /C?

USER:

PRINT NA, CY, AD 1

PROG:

1

NA - FLORIDA ENDOWMENT FOR THE HUMANITIES (FEH)

CY - FLORIDA (FL)

AD - LET 468, UNIVERSITY OF SOUTH FLORIDA, TAMPA, FL 33620 TEL.
(813) 977-4094

SS 3 /C?

USER:

(CY) ENGLAND

PROG:

SS (3) PSTG (239)

SS 4 /C?

USER:

(CY) GREAT BRITAIN

SS (4) PSTG (6)

26.4.4 ENTRY MONTH (EM) (Rangeable)

This data element is a four-digit number in the format YYMM (YearMonth). The Entry Month represents the date that the description of the information resource was approved by the organization submitting the data. If the description is pending approval by the organization, then the value 0000 will appear in this field. Entry Month is directly searchable, rangeable and printable. (Please see Section 4.6.4 of this Manual for a discussion on the ranging capability.) Examples:

SS 1 /C?

USER:

8204 (EM)

PROG:

SS (1) PSTG (239)

To range: SS 3 /C?

USER:

2 AND FROM 8201 TO 8301 (EM)

PROG:

SS (3) PSTG (74)

26.4.5 GENERAL NOTES (GN)

The General Notes field information is divided into sections labelled Facilities, Note, and Regional Offices (abbreviated as Regional Off.). The General Notes field does not occur in all records nor does each section occur in those records where the field is present.

The sections in the General Notes field are as follows:

FACILITIES - Briefly describes various resources, such as computer processing capabilities, testing laboratories, bookstores, etc., available at the organization.

NOTE - Occurs infrequently in the database, and is generally used if needed for clarity.

REGIONAL OFF. - Lists the regional offices of the organization, field offices, etc.

Significant words within the General Notes field are Text Word searchable. (See Section 26.5.2, Text Word Searching.) This field is printable and can also be searched using the STRINGSEARCH capability. (See Section 4.6.3 for specific information on STRINGSEARCH.)

26.4.6 KEYWORDS (KW)

The Keywords (KW) field is both directly and Text Word searchable. It contains indexing terms assigned by the Library of Congress to each record in the database. These terms are descriptors of the subject matter handled by an organization or in which the organization specializes. The first 39 characters of each Keyword are directly searchable using the (KW) qualifier.

Because there is no hardcopy thesaurus for these Keywords available at this time, it is suggested that searchers NEIGHBOR the Keywords field for possible Keywords to use. Also, individual words within the KW field can be searched as Text Words. (See Section 26.5.2, Text Word Searching.) Example:

SS 1 /C?

USER:

NBR ALLERGIC (KW)

PROG:

POSTINGS	TERM
1	ALLELOPATHY
2	ALLERGENS
20	ALLERGIC DISEASES
1	ALLIANCES
6	ALLIED HEALTH PERSONNEL

UP N OR DOWN N?

USER:

FIND ALLERGIC DISEASES (KW)

26.4.9 SECONDARY SOURCE ID (SI)

This field contains the accession number for the record. The first three alpha characters in the SI field are an acronym for the National Referral Center (NRC), followed by a slash, two digits, slash, six digits. The first three alpha characters are searchable, and the entire field is directly searchable and printable. Example:

SS 1 /C?
USER:
(SI)NRC/69/010192
PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
PRT SI
PROG:

SI - NRC/69/010192

SS 2 /C?
USER:
(SI) NRC
PROG:
SS (2) PSTG (13056)

This reflects that there are 13,056 records in the database at this time.

26.4.10 STATUS (ST)

The Status field is printed only when the text of the information resource description is in draft form. The literal, "Resource description not yet validated," will appear in this field only when the Entry Month (EM) field contains 0000. (See EM field, Section 26.4.4.) When the text is approved by the contributing organization, the Entry Month field is updated and the Status field is removed. This field is printable, but it is not directly searchable.

A sample of the Status data element is:

ST - Resource description not yet validated.

26.4.11 Zip Code (ZP)

This field indicates the Zip Code for the information resource as contained in the first occurrence of the Address field. Where no zip code is available, such as in descriptions of many non-U.S. organizations, this field contains XX. This field is directly searchable and printable.

A group of zip codes can be searched by use of truncation symbols. Examples:

SS 1 /C?
USER:
(ZP) 20783
PROG:
SS (1) PSTG (3)

SS 2 /C?
USER:
PRT NA, AD, ZP 1
PROG:

1
NA - INSTITUTE OF HUMAN PERFORMANCE
AD - 7676 NEW HAMPSHIRE AVE., Langley Park, MD 20783 TEL. (301)
445-0900
ZP - 20783

SS 2 /C?
USER:
ALL 207: (ZP)
PROG:
SS (2) PSTG (91)

SS 3 /C?
USER:
PRT ZP 2
PROG:

1
ZP - 20783

2
ZP - 20744

26.5 SPECIAL FEATURES OF SEARCHING DIRLINE

26.5.1 KEYWORD SEARCHING

The subject descriptors or indexing terms which have been assigned by professional analysts at the National Referral Center to each information resource description in the NRC database appear in the Keywords (KW) field (see Section 26.4.6). However, no hardcopy thesaurus is available at this time to consult for searching the Keywords field. NEIGHBORing the Keywords field online is therefore recommended to see what terms have been used by the NRC indexers.
Example:

SS 1 /C?
USER:
NBR HERPES (KW)
PROG:

POSTINGS	TERM
1	HEROES
1	HEROIN
3	HERPES SIMPLEX VIRUS
2	HERPESVIRUSES
1	HERPESVIRUSES LITERATURE FILE

UP N OR DOWN N?

FIND ALL HERPES: (KW)

PROG:

SS (1) PSTG (4)

SS 2 /C?

USER:

PRT 1 NA, KW COMPRESSED

PROG:

1

NA - HERPES RESOURCE CENTER (HRC)

KW - VENEREAL DISEASES ; HERPES SIMPLEX VIRUS ; PUBLIC HEALTH ;
MEDICAL RESEARCH ; MEDICAL CARE ; SOCIAL MEDICINE ; CONTINUING
MEDICAL EDUCATION ; PUBLIC EDUCATION ; HEALTH EDUCATION ;
PROFESSIONAL ASSOCIATIONS

The Keywords field is also Text Word searchable. (See Section 26.5.2).

26.5.2 TEXT WORD SEARCHING

When using the Text Word capability in DIRLINE, four fields are being searched: Abstract (AB), General Notes (GN), Keywords (KW), and Name (NA). In the following example, 26 unit records contain the words "venereal" and "disease(s)"; however, only 19 of them contain the keyword "venereal diseases." SS 2 shows that 20 of the 26 records contain the phrase "venereal disease(s)" in either the Abstract or General Notes field.

SS 1 /C?

USER:

(TW) VENEREAL AND DISEASE#

PROG:

MM (DISEASE#) (3)

- 1 DISEASE (TW)
- 2 DISEASED (TW)
- 3 DISEASES (TW)

SPECIFY NUMBERS, ALL, OR , NONE-

USER:

1, 3

PROG:

SS (1) PSTG (26)

SS 2 /C?

USER:

PRT NA, KW COMPRESSED 2

PROG:

1

NA - BAY AREA PHYSICIANS FOR HUMAN RIGHTS (BAPHR)

KW - SAN FRANCISCO BAY AREA ; HOMOSEXUALITY ; PROFESSIONAL
ORGANIZATIONS ; PHYSICIAN PATIENT RELATIONS ; HEALTH EDUCATION ;
MEDICAL EDUCATION ; MENTAL HEALTH ; PSYCHIATRY ; HOMOSEXUALS ;
VENEREAL DISEASES ; SEX THERAPY ; MEDICAL CARE ; SOCIAL ACTION ;
HUMAN RIGHTS

2
NA - NEW YORK CITY DEPARTMENT OF HEALTH ; BUREAU OF LABORATORIES ; SEROLOGY SECTION
KW - SYPHILIS SERODIAGNOSIS ; TREPONEMA IMMOBILIZATION TEST ; TOXOPLASMOSIS ; MEDICAL SCREENING ; LABORATORY TESTS ; REAGENTS ; LABORATORY DIAGNOSIS ; PREVENTIVE HEALTH SERVICES ; DIAGNOSTIC SERVICES ; PUBLIC HEALTH ; EPSTEIN-BARR VIRUS

SS 2 /C?

USER:

TS (AB) : VENEREAL DISEASE: OR : VENEREAL DISEASE: (GN)

PROG:

SS (2) PSTG (20)

SS 3 /C?

USER:

(KW) VENEREAL DISEASES

PROG:

SS (3) PSTG (19)

DIRLINE defaults to searching Text Words; individual words can, therefore, be searched with or without the (TW) qualifier.

26.5.3 GEOGRAPHIC SEARCHING

The names of the states in which the U.S. based information resource is located appear in the CY field. The state names have been abbreviated according to the two-character codes used by the United States Postal Service (USPS). A list of USPS state name abbreviations is included in Appendix A of this chapter. It is best to NEIGHBOR the CY field for the exact form(s) of the country for non-U.S. organizations. (See Section 26.4.3, Country (CY) field.)

Keep in mind that only the state or country name, and zip code as contained in the first occurrence of the Address (AD) field are directly searchable in the Country (CY) and the Zip Code (ZP) fields.

26.5.4 SEARCHING DEFAULTS

An unqualified search term in DIRLINE is processed for a match in any field except the Keywords (KW) field. This means DIRLINE is essentially a free-text database when searching single word terms. This is often referred to as a search default to Text Words. Multi-word Keywords must be qualified by (KW); single word Keywords should also be qualified with (KW) if a controlled vocabulary search is desired. Ranging defaults to the Entry Month (EM) field. STRINGSEARCH defaults to the Abstract (AB) field.

26.6 DIRLINE PRINT COMMANDS

There are three standard PRINT formats for DIRLINE: PRINT (PRT), PRINT FULL (PRT FU), and PRINT DETAILED (PRT DL). (See Unit Record, Section 26.4 for the data elements that display for each format.)

Tailored PRINT commands, those in which the searcher selects the elements to be printed out, may be constructed according to the principles set forth in Part 4 of this Manual. Because the standard PRT command includes the Abstract field which can sometimes be lengthy, searchers may consider a tailored print command such as PRT SI, NA, KW COMPRESSED for browsing.

APPENDIX A

26.7 UNITED STATES POSTAL SERVICE (USPS) TWO-LETTER STATE ABBREVIATIONS

Alabama (AL)	Kentucky (KY)	Ohio (OH)
Alaska (AK)	Louisiana (LA)	Oklahoma (OK)
Arizona (AZ)	Maine (ME)	Oregon (OR)
Arkansas (AR)	Maryland (MD)	Pennsylvania (PA)
California (CA)	Massachusetts (MA)	Puerto Rico (PR)
Colorado (CO)	Michigan (MI)	Rhode Island (RI)
Connecticut (CT)	Minnesota (MN)	South Carolina (SC)
Delaware (DE)	Mississippi (MS)	South Dakota (SD)
District of Columbia (DC)	Missouri (MO)	Tennessee (TN)
Florida (FL)	Montana (MT)	Texas (TX)
Georgia (GA)	Nebraska (NE)	Utah (UT)
Guam (GU)	Nevada (NV)	Vermont (VT)
Hawaii (HI)	New Hampshire (NH)	Virginia (VA)
Idaho (ID)	New Jersey (NJ)	Virgin Islands (VI)
Illinois (IL)	New Mexico (NM)	Washington (WA)
Indiana (IN)	New York (NY)	West Virginia (WV)
Iowa (IA)	North Carolina (NC)	Wisconsin (WI)
Kansas (KS)	North Dakota (ND)	Wyoming (WY)

NOTE: The two-letter abbreviation for Oregon (OR) is the same as the boolean operator OR. It is recommended that you use the full state name when searching for Oregon.

INDEX

Numbers in this index refer to hierarchical sections, not to pages, of the Manual. For example, the entry EXPLODE capability has the reference 4.5.5.4 which means:

4	Part 4 - ELHILL Searching
4.5	Searching
4.5.5	Special Search Capabilities
4.5.5.4	Explosions

In general, the first number given is for the general discussion of that entry unless there is a subentry for definition or discussion. Many entries do have subentries to indicate the content of the section, e.g.,

On-line services, NLM	
charges	1.6
hours	1.7

Subentries with no corresponding section numbers serve to explain more fully the information found in the next higher entry; refer to the number of the higher level entry. For example:

SB (Journal subset)	
MEDLINE	7.3.12
Abridged Index Medicus	
Index Medicus	

Under each data base name is an alphabetical listing of data elements found in its unit record. All mnemonics for data elements appear in the index filed as one word with their English language equivalents enclosed in parentheses, e.g.,

HT (Hierarchical terms)	
CANCERPROJ	17.3.7
	17.4
CLINPROT	18.3.19
Hyphen	
as term delimiter in TOXLINE	12.5

The names of all data elements are likewise indexed with their two-letter mnemonic abbreviations enclosed in parentheses, e.g.,

Hierarchical terms (HT)	
CANCERPROJ	17.3.7
	17.4
CLINPROT	18.3.19

Commands and messages have been indexed individually as well as under the general entries of Commands, Communications messages, and Program messages. Cross references have been kept to a minimum by the method of repeating necessary information throughout the index.

Filing in this index is word by word with numerics preceding alphabetics and ignoring internal punctuation, e.g.,

Publication date (PD)
Publication, place of
Publication type (PT)

Entries which are not followed by qualifiers in parentheses precede entries which do have qualifiers, e.g.,

Language subheadings
Language subheadings (SH)

In entries which have more than one qualifier, alphabetical order is determined by the qualifiers, e.g.,

Entry date (DA)	
AVLINE	9.5.40
CATLINE	8.5.43
NAME AUTHORITY FILE	
name	10.3.16
series	10.3.16
	10.4.13
Entry date (ED)	
CANCERLIT	16.3.13
CANCERPROJ	17.3.17
CLINPROT	18.3.16
MEDLINE	7.3.8
MESH VOCABULARY FILE	6.8.25

Because the data element names with more than one mnemonic, such as Entry Date in the above example, are sub-filed according to their mnemonics, a given element may be divided. Scanning the Index will help to locate the correct term. Additionally, if a data element concept has more than one mnemonic, then the listing under any one mnemonic will not be complete. Do not look up ED (Entry Date) in the Index and conclude that CATLINE lacks this data element; in actuality, CATLINE does have entry dates, but the mnemonic is DA (for Date of Entry) which files pages ahead of ED in the Index. Therefore, use the mnemonic entry if you need a quick translation or explanation when working with unit records, but use the English language entry if you want to see in which data bases certain data elements occur.

Please note that PART 2 - Mini-Manual has not been included in the Index; it is designed to be removed from the Manual to be used independently for ready reference at the terminal.

3704				
for TELENET	3.4.1	for route-species	14.4.11.1	
8CI (Eighth Collective Index Period)		for toxicity data doses/	14.4.11.2	
CHEMLINE	13.4.5	concentrations	14.4.11.3	
RTECS vs. CHEMLINE	14.4.2	for units of measurement	14.5	
	14.4.5	general (Attachment 1)	6.3.7.1	
9CI (Ninth Collective Index Period)		topical subheadings	6.8.15	
CHEMLINE	13.4.5	TOXLINE		
	14.4.2	data tags	12.4.13	
04NLM		index tags	12.4.12	
AVLINE	9.5.27	Abridged Index Medicus	1.3	
	9.5.28	as a journal subset		
CATLINE	8.5.29	in HEALTH	23.4.24	
0XNLM		in MEDLINE	7.3.12	
AVLINE	9.5.27	in SERLINE	11.3.52	
	9.5.28	Abstract (AB)		
CATLINE	8.5.29	AVLINE	9.5.26	
AA (Abstract author)		Text Word searching	9.5.26	
HEALTH	23.4.1	types	9.5.26	
AA (Author address)		CANCERLIT	16.3.6	
CANCERLIT	16.3.3	CANCERPROJ	17.3.4	
TOXLINE	12.4.4	CATLINE	8.5.28	
AAMC (Association of American		CLINPROT	18.3.7	
Medical Colleges)		EPILEPSY	19.3.14	
AVLINE	9.1	HEALTH	23.4.2	
review body	9.5.47	MEDLINE	7.3.1	
AB (Abstract)		limiting retrieval to cita-		
AVLINE	9.5.26	tions with abstracts	7.3.2	
Text Word searching	9.5.26	TOXLINE	12.4.9	
types	9.5.26	Abstract author (AA)		
CANCERLIT	16.3.6	HEALTH	23.4.1	
CANCERPROJ	17.3.4	Abstract, English		
CATLINE	8.5.28	HEALTH	23.4.8	
CLINPROT	18.3.7	MEDLINE		
EPILEPSY	19.3.14	as indicator	7.3.7	
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Health; National Cancer Institute	18.3.8	in source journal/citation	12.4.8
U.S. Occupational Health Standard		Volume/issue (VI)	
RTECS	14.4.15	BIOETHICS	21.3.22
USER: .cue	4.4	in source	21.3.16
User environment	3.4.2	EPILEPSY	19.3.11
USER ID ALREADY IN USE message	3.5.2.5	HEALTH	23.4.32
USERS command	4.9.25	in source	23.4.27
USOS (United States Occupational	4.9.27	MEDLINE	7.3.32
Health Standard)	14.4.15	in source	7.3.26
Variable character symbol, multiple (colon)	4.5.5.2	VT (Vernacular title)	
see also Truncation		EPILEPSY	19.3.5
Variable character symbol, single (hash mark)	4.5.5.3		
see also Hash mark			
Variant spellings	4.5.5.2	Weekly Proof sheets	
use of truncation to overcome		CATLINE	8.2
Variant title		Wiswesser Line Notation (WL)	
CATLINE	8.5.7	CHEMLINE	13.4.8
VD (Revision date)		RTECS	14.4.8
MEDLINE	7.3.24	WL (Wiswesser Line Notation)	13.4.8
Venn diagrams	4.5.3	CHEMLINE	13.4.8
Vernacular title		RTECS	14.4.8
HEALTH	23.4.29	WLN (WL)	
HISTLINE	22.3.3	CHEMLINE	13.4.8
Vernacular title (VT)		RTECS	14.4.8
EPILEPSY	19.3.5	Work space	3.4.2
Vernacular/Transliterated title (TT)		World Health Organization	14.4.14
MEDLINE	7.3.31		
VERSION command	4.9.26	Year	
4.9.27		begin date	
VERSION LONG command	4.9.26	CANCERPROJ	17.3.8
VERSION SHORT command	4.9.26	CLINPROT	18.3.9
VERSION SYMBOLIC command	4.9.26	copyright date	
VI (Volume/Issue)		AVLINE	9.5.13
BIOETHICS	21.3.22	CATLINE	8.5.12
in source	21.3.16	correction date	
EPILEPSY	19.3.11	CLINPROT	18.3.20
HEALTH	23.4.32	end date	
in source	23.4.27	CANCERPROJ	17.3.9

CATLINE	8.5.43	initial	11.3.41
CLINPROT	18.3.16	TOXLINE	12.4.14
HEALTH	23.4.6	in source journal/citation	12.4.8
HISTLINE	22.3.11	Year (YR)	
MEDLINE	7.3.8	BIOETHICS	21.3.23
MESH VOCABULARY FILE	6.8.25	HEALTH	23.4.33
NAME AUTHORITY FILE		Year of publication (CL)	
name	10.3.16	SERLINE	11.3.42
series	10.3.16	Year of publication (YP)	
established	10.4.13	CANCERLIT	16.3.9
SERLINE		EPILEPSY	19.3.10
first/last	11.3.56	not in source	19.3.8
AVLINE		MEDLINE	7.3.33
CATLINE	9.5.12	TOXLINE	12.4.14
SERLINE	8.5.11	Year of publication (YR)	
fiscal	11.3.4	AVLINE	
CANCERPROJ	17.3.10	format	9.5.33
CLINPROT	18.3.11	in imprint	9.5.33
last major revision		searching	9.5.13
AVLINE	9.5.41	CATLINE	9.5.33
CATLINE	8.5.44	in imprint	8.5.35
HEALTH	23.4.19	SERLINE	8.5.12
MEDLINE	7.3.16	YES	11.3.41
MESH VOCABULARY FILE	6.8.31	avoid in title search key	
SERLINE	11.3.61	AVLINE	9.5.8.1
last revision		CATLINE	8.5.7.1
AVLINE	9.5.42	SERLINE	11.3.2.1
CATLINE	8.5.45	YP (Publication year)	12.4.14
HEALTH	23.4.16	TOXLINE	
NAME AUTHORITY FILE		YP (Year of publication)	
name	10.3.18	CANCERLIT	16.3.9
series	10.3.18	EPILEPSY	19.3.10
major descriptor established	10.4.15	MEDLINE	7.3.33
MESH VOCABULARY FILE	6.8.22	YR (Initial year of publication)	
major revision		SERLINE	11.3.41
HEALTH	23.4.19	YR (Year)	
minor descriptor established		BIOETHICS	21.3.23
MESH VOCABULARY FILE	6.8.23	HEALTH	23.4.33
name date		YR (Year of publication)	
NAME AUTHORITY FILE	10.3.2	AVLINE	
publication date		format	9.5.33
HEALTH	23.4.7	in imprint	9.5.33
MEDLINE	7.3.23	searching	9.5.13
pull date		CATLINE	9.5.33
SERLINE	11.3.60	in imprint	8.5.35
qualifier established		YR2 (Year of publication - final)	
MESH VOCABULARY FILE	6.8.32	AVLINE	9.5.33
review date		CATLINE	8.5.35
AVLINE	9.5.46		
revision date		Z category	
MEDLINE	7.3.24	AVLINE	9.5.3
withdrawn date		CATLINE	
MESH VOCABULARY FILE	6.8.21	country of publication	
year of publication		and tree number	
AVLINE	9.5.33	subheading	
BIOETHICS		HEALTH	
in imprint	21.3.5	MEDLINE	
in source	21.3.16	MeSH	
in volume/issue	21.3.22	descriptor	6.3.5
CANCERLIT	16.3.9	descriptor class for	6.8.4
in source	16.3.5	subheading	6.3.7
CATLINE	8.5.35	qualifier type	6.8.12
EPILEPSY	19.3.10	SERLINE	11.3.50
in secondary source		ZN (MeSH Z tree number)	
journal	19.3.16	HEALTH	23.4.34
not in source	19.3.8		
HEALTH	23.4.33		
HISTLINE			
in source	22.3.10		
in title	22.3.3		
MEDLINE	7.3.33		
SERLINE			
final	11.3.42		

the appropriate search name. Please note: The form must be completed and sent to NLM only if the tailored print format option is desired specifying the data elements you wish printed. All other formats are fixed as indicated.

PRE-EXPLOSIONS IN 1979 MEDLINE FILES

Clifford A. Bachrach, M.D.

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With the mounting of the 1979 MEDLINE files, a new capability, called Pre-Explosion, has been added to facilitate search. It is designed to overcome some of the limitations of the "Explode" capability.

When the online searcher attempts to explode a large tree such as C4 in the ordinary way, the computer sets about collating over 400 lists, many of which contain thousands of individual entries. The result is an overflow of some of the limits that have been established to prevent any single online user from making unreasonable use of computer capacity at the expense of other online users. Until now, such large explosions have been possible only in offsearches.

To make "pre-explosion" possible, some of the commonly needed explosions have been accomplished in advance and stored. Use of the search element Neoplasms (PX) for example calls up a single citation list representing every citation that has been indexed with one or more of the descriptors in C4. One may "and" or "or" this element with any other element, as one would use an ordinary explosion. However, in searching, subheadings cannot be linked directly to the descriptors contained in the Pre-Explosion. That is, ELHILL will not respond appropriately to a request for Neoplasm (PX)/ET, nor can the desired result be obtained by use of the "SUBS APPLY" command. Of course, one may "and" the Neoplasms (PX) with the subheading ET, recognizing that this may retrieve some citations in which the subheading is present but not linked to a neoplasm as, for example;

PHEOCHROMOCYTOMA
HYPERTENSION/et

The available Pre-Explosions are:

<u>Subject</u>	<u>Tree</u>
Neoplasms	C4
Vertebrates	B2
Mammals	B2.649
Mental Disorders	F3.709
Enzymes	D8.586
Proteins	D12.776
Neurologic Manifestations	C10.597
Heart Diseases	C14.280
Cells	A11

In searching, Pre-Explosions are addressed by name, not by number. Note that one may use Enzymes (PX) to include every citation containing an enzyme heading, or *Enzymes (PX) to include citations indexed with one or more enzymes having a central concept ("print") indicator.

The Pre-Explosions have also been included in all backfiles, as well as in SDILINE. One may therefore use this capability when one is doing an offsearch of backfiles while doing an online search of either MEDLINE or SDILINE.

Users are invited to call to our attention any additional large explosions for which they have recurring need. We will consider these as candidates for Pre-explosion when building the 1980 files in the fall of 1979. Some large explosions, such as D1, D2, and D3 have been intentionally omitted because we have not been convinced of the logical justification for their inclusion in a search strategy. These decisions are subject to change if the need for them is clearly demonstrated.

ANNOUNCEMENT: EVALUATION OF THE ONLINE SEARCH PROCESS

The National Library of Medicine has awarded a contract to Cuadra Associates, Inc., in Santa Monica, California and its subcontractor, King Research, to study the relationship between various types of training and the quality and style of searching on the NLM retrieval system. Although there are many ways in which NLM search analysts are trained, the study team has been asked to compare two groups of analysts: those who have been formally trained in one of the courses (Initial, Advanced or 3-week) provided under NLM auspices, and those who have been trained in some other way (e.g., by a colleague, by one or more other online suppliers, or by self-instruction).

A total of about 200 NLM analysts throughout the U.S. will be invited to participate in the study. The results of the searches that analysts will be asked to perform will be coded to maintain complete confidentiality, and the data will be aggregated in several ways for comparative analysis. Letters of invitation from Cuadra Associates to analysts will be sent through the directors, online coordinators, or other supervisory personnel in the NLM subscribing organizations, sometime late in the first quarter of 1979. The research project staff is hopeful that it will receive a high level of interest from these contacts to help ensure the identification of a broad group of analysts from which to sample for participation in this important and potentially valuable study.

Project results will include an analysis of the individual tasks that make up the search process--from receipt of a request to delivery of the final bibliography--and whatever is learned about the relative effectiveness of different training approaches, which should help to suggest improvements for future online training and continuing education programs.

The Evaluation of the Online Search Process project is a one-year study, and Judy Wanger is Project Director. The NLM Project Officer is Laura Kassebaum, OnLine Training Coordinator.

