

- DISABILITY INSURANCE PROGRAM. Selected data. U. S. Dept. of Health, Education, and Welfare, Washington, D. C., annual.
- Data on diagnoses of worker disability allowances, number and percentage distribution of workers for whom a period of disability was allowed during the year, etc.
- U. S. Tariff Commission. SYNTHETIC ORGANIC CHEMICALS. United States Production and Sales. Government Printing Office, Washington, D. C., annual with monthly supplements.
- Quantity of production and quantity and value of sales of all synthetic organic chemicals for which data are disclosable. A complete breakdown of medicinal chemicals is included as a separate in the production and sales of intermediates and finished synthetic organic chemicals.
- VALUE LINE INVESTMENT SURVEY. Arnold Bernhard and Co., New York, N. Y., weekly (\$144 yearly).
- In two separated sections: industry analyses and depth analyses of a company's stock; editorial views forecasting the action of particular stocks on the market.
- Vidal, Louis. DICTIONNAIRE VIDAL. Office de Vulgarisation Pharmaceutique, Paris, 1963.
- Dictionary listing of French pharmaceuticals, giving composition, action and uses, administration, form, and manufacturer. Summary listing of manufacturer and products.
- WALL STREET JOURNAL INDEX. Dow Jones and Co., Inc., New York, N. Y., monthly and annual volume available.
- First section on corporate news gives a short descriptive summary of original article and location, including entries for dividends, profit reports, and per share earnings. General news by industry and subject in second section.
- Wasserman, Paul. INFORMATION FOR ADMINISTRATORS (a guide to publications and services for management in business and government). Cornell University Press, Ithaca, N. Y., 1956.
- Up-to-date sources of information available from trade and professional associations, chambers of commerce, business and government research organizations on local and international areas.
- World Health Organization. ANNUAL EPIDEMIOLOGICAL AND VITAL STATISTICS. World Health Organization, Geneva, Switzerland, annual.
- Statistics and population deaths according to cause by country and area. Also includes cases of and deaths from infectious diseases, health personnel, and hospital establishments. Text in English and French.
- World Health Organization. EPIDEMIOLOGICAL AND VITAL STATISTICS REPORT. World Health Organization, Geneva, Switzerland, monthly (\$12 yearly).
- Regularly contains tables, by country, of current data on infectious diseases, mortality and natality, causes of death, and morbidity statistics on a special topic. Several causes of death summarized in each issue.
- World Health Organization. INTERNATIONAL DIGEST OF HEALTH LEGISLATION. World Health Organization, Geneva, Switzerland, quarterly (\$9 yearly).
- Each issue contains a selection of health laws and regulations by country on particular topics, and occasional studies in comparative health legislation. Includes a bibliographical section of reviews of references to works on health legislation recently received by the W.H.O. Library.
- World Health Organization. WEEKLY EPIDEMIOLOGICAL RECORD. World Health Organization, Geneva, Switzerland, weekly (\$14 yearly).
- Regularly gives notifications under and information on the application of the International Sanitary Regulations, and notes on current incidence of the six quarantinable diseases. The infected areas are listed and epidemiological notes are given.
- WORLD REVIEW OF DRUG NEWS. Pharmaceutical Manufacturers' Association, Washington, D. C., weekly.
- Brief reports on important developments affecting pharmaceutical companies throughout the world.
- "World Trade in Chemicals, 2 Parts," CHEMICAL PRODUCTS AND AEROSOL NEWS. 26:49+, June-July, 1963.
- For each country, gives values of imports and exports to other countries, exports by class in quantity and value, and a summary world trade in drugs. Pharmaceuticals are broken down into broad categories only.
- YEARBOOK OF INTERNATIONAL ORGANIZATIONS. 1962-1963, 9th Ed., Union of International Associations, Brussels, Belgium.
- A guide to U. N., European Community, and other inter-governmental organizations, and international non-government organizations, such as those in the fields of law, economics, commerce, health, and science. Gives addresses, history, members, structure, finance, activities, and publications. Indexes by subject, initials, and geographical location.

The Chemical and Related Technical Literature of Lithuania*

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There is an ever increasing interest among chemists of the English-speaking nations in the basic and applied research being done in Central and Eastern Europe. Better knowledge of little known sources of chemical information can contribute to the development of a more efficient American scientific community.

Historically, the first known description of Lithuanian chemical activities in the *broad sense* was recorded in

Old English literature by Wulfstan, King Alfred the Great's explorer, about 1,000 years ago. Wulfstan wrote that certain Baltic Eastlanders had "the power of producing cold, and it is because they produce this cold upon them that the corpses lie so long without decaying. And if a man, sets two vats full of ale or water, they cause both to be frozen over, whether it be summer or winter."

It is probable that other chemical arts were introduced to the ancient Lithuanians by the Phoenicians during their trading trips for amber, a commodity which always has been abundant on the eastern shore of the Baltic Sea.

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Many practical phases of empirical agricultural and medicinal chemistry were practiced by the Vaidylos, or pagan priests.

Circumstances at the present time unfortunately preclude a more dynamic interchange of scientific and technical personnel between East and West. Thus, the only available source for information on Lithuanian science remains the published accounts of research and technology printed in an unfamiliar Indo-European language. Much of the material for this paper was obtained from the Lithuanian language literature available to the public in the Central European section of the Reference Department, Library of Congress, Washington, D. C.; and from the resources of the privately supported Lithuanian Library of Baltimore, Maryland.

Lithuanian achievements in chemical research and technology are normally reported in interdisciplinary publications. Papers written in Lithuanian frequently have summaries attached in French, German, Russian, or English. Since the Second World War, there has been a tendency to publish the results of pure research in Russian with a Lithuanian summary added. Most studies in applied research and practical technology are published only in Lithuanian with Russian, or occasionally English, summaries. Before the war, publication in French and German was quite frequent. Latin was the literary language of medieval Europe, including Lithuania, and surprisingly for northern Europe, some scholarly works were even issued in Italian, Polish, or Slavonic. The use of interdisciplinary scientific and technical publications is much more common there than in the United States.

A brief description of 12 publications follows. These titles were especially chosen from the others available, because they represented a good over-all view of the type of chemical work being done in Lithuania at the present time. The range is from academic research to the activities in agricultural and industrial laboratories. The order of their presentation is in general that from pure research to practical technology.

First, the name of the publication is given in Lithuanian. The translation follows immediately with only the omission of the usual phrase "of Lithuania or of the Lithuanian SSR," common to the official titles.

First in importance is *Lietuvos TSR Mokslo Akademijos Darbai* (Proceedings of the Academy of Sciences) published in the national capital, Vilnius. It is issued in three series roughly concerned with the humanities and social sciences, the physical sciences, and the life sciences. *Series A* is printed about two times a year in 700 copies with approximately 300 pages in each number. While it is primarily concerned with economics, law, archaeology, ethnology, Lithuanian language, literature, and folklore, one occasionally finds excellent articles on the chemical arts and comprehensive surveys of the various industries in the republic.

Series B is a quarterly of 650 copies with about 250 pages in each number. Theoretical papers are given in what are known as the physical sciences. Chemistry, physics, mathematics, and geology predominate. Some examples of comprehensive chemical articles are: metal chloride-catalysis, synthesis of new organic compounds, and analysis of metals.

Series C is printed three times a year in 600 copies of about 250 pages in each number. It is devoted to the biological sciences of botany, zoology, physiology, and agriculture.

Next, let us consider the *Kauno Politechnikos Instituto Darbai* (Proceedings of the Kaunas Polytechnic Institute). This serial is printed three times a year in 500 copies of about 100 pages in each number. Each issue is devoted to one of the technical faculties of the institute. The Faculty of Electrical Technology and Mechanical Engineering is usually well represented. The Faculty of Technology includes work done in biochemistry, inorganic and physical chemistry, colloid science, and organic chemistry. A typical example of a paper from that faculty deals with the degradation of 1,2,3,4-tetrahydro-7,8-benzoquinoline and the characterization of its products.

Lietuvos Veterinarijos Akademijos Darbai (Proceedings of the Academy of Veterinary Science) is a serial of nearly 200 pages in each number, published irregularly in Kaunas. It includes all phases of research in physiology, and biochemistry. An example of a paper having chemical interest is concerned with the cholinesterase activity in dogs.

Lietuvos Zemes Ukio Akademijos Moksliniai Darbai (Scientific Proceedings of the Academy of Agriculture) is a quarterly printed in 600 copies of about 400 pages in each number. Chemical papers include the analysis of vegetables, soils, and surface and ground waters.

Lietuvos TSR Geografinė Draugija: Geografinis Metrastis (The Annual Chronicle of the Geographical Society) lists the chemical analysis of regional lakes, rivers, and natural springs. Detailed studies are given especially on the mineral springs located in health resorts.

Lietuvos Misku Ukio Mokslinio Tyrimo Institutas: Darbai (Proceedings of the Forestry Scientific Institute) is an irregular serial printed in 1500 copies of nearly 300 pages in each number. It contains papers on the biochemistry and chemical analysis of soils, waters, and trees. Changes in soils and waters with ecological variation are stressed.

Vilnius Valstybinis Pedagoginis Institutas Mokslo Darbai (Scientific Proceedings of the Vilnius State Pedagogical Institute) is also an irregular serial of about 200 pages each number in 1000 copies of issue. Each volume is devoted to a different discipline. Thus, one will be entirely on Lithuanian philology while another will be devoted exclusively to mathematics, physics, or chemistry. An example of a paper is "The Evolution in the Understanding of Atomic Structure."

Zurnalų ir Laikraščių Straipsnių Metrastis (The Journal and Newspaper Articles Chronical), a monthly publication of about 80 pages each number, is printed in 1500 copies by the National Lithuanian Book Center. The latter institution is approximately the equivalent of our own Library of Congress. Over 14,000 published items are listed each year in the Chronicle, which is divided into 30 major divisions with many varied sections under each. Its Division 15 is reserved for Science and Mathematics with Section 3 assigned to chemistry and chemical technology. An example of the type of article listed there is "New Methods for the Analysis of Iron and Various Acids." Another Section 7

Table I
Journal Titles

Title (trans.)	Frequency	Type of articles
<i>Lietuvos TSR Mokslo Akademijos Darbai</i> (Proc. Natl. Acad. Sci.)		
<i>Series A</i>	Semiannually	Social sciences
<i>Series B</i>	Quarterly	Physical sciences
<i>Series C</i>	Irregular	Life sciences
<i>Kauno Politechnikos Instituto Darbai</i> (Proc. Polytech. Inst. Kaunas)	Irregular	Applied chemistry
<i>Lietuvos Veterinarijos Akademijos Darbai</i> (Proc. Lith. Vet. Acad. Sci.)	Irregular	Biochemistry, physiology
<i>Lietuvos Zemes Ukio Akademijos Moksliniai Darbai</i> (Sci. Proc. Lith. Acad. Agr.)	Quarterly	Biochemistry, agricultural chemistry
<i>Lietuvos TSR Geografinė Draugija Geografinis Metrastis</i> (Chron. Lith. Geograph. Soc.)	Irregular	Geochemistry, analytical chemistry
<i>Lietuvos Misku Ukio Mokslinio Tyrimo Instituto Darbai</i> (Proc. Lith. Sci. Inst. Forestry)	Irregular	Plant biochemistry
<i>Vilniaus Valstybinis Pedagoginis Institutas Mokslo Darbai</i> (Sci. Proc. Ped. Inst. Vilnius)	Irregular	Theoretical chemistry, physics, mathematics
<i>Zurnalų ir Laikraščių Straipsnių Metrastis</i> (J. Newspr. Chron.)	Monthly	Arts, sciences, articles index
<i>Lietuvos Mokslo Akademija: Centrine Biblioteka Darbutotju</i> <i>Straipsnių Bibliografija</i> (Natl. Acad. Sci. Centr. Libr. Biblio.)	Irregular	Research abstracts
<i>Mokslas ir Technika</i> (Sci. Technol.)	Monthly	Science news magazine

is designated for metallurgy and ore technology. Division 16 is devoted to industry. Section 10 is used for the chemical industry. An example of an entry appearing here is "A New Plastics Factory and Modern Methods of Making Various Plastics." Another Section 13 is for the food industry. Division 30 is for library science. Some other sections deal with archaeology, art, history, music, museums, the theater, education, geography, conservation, meteorology, and so forth. Each monthly issue contains an author and article index. There are also annual indexes.

Lietuvos TSR Mokslo Akademija: Centrine Biblioteka Darbuotojų Straipsnių Bibliografija, Vilnius, Lietuva (The Bibliography of Research Publications of the Central Library of the Academy of Sciences, Vilnius, Lithuania) has a circulation of 1000 copies, published irregularly with about 400 pages in each number. It and the chronicle described above are the keys to the scientific and cultural life of the nation under the present circumstances.

Finally, there is an interesting technical magazine called *Mokslas ir Technika* (Science and Technology). It is a well-illustrated monthly of about 50 pages in each number. It is sponsored by the technical and industrial committees of the Council of Ministers, the Academy of Sciences, and the National Council of Scientific and Technical Societies.

Its size and style is the same as that of our own *Chemical and Engineering News*. The contents, however, resemble a combination of types of material that appear in C. & E. News, certain sections of *Industrial and Engineering Chemistry*, *Analytical Chemistry*, *Journal of Agricultural and Food Chemistry*, as well as in *Science*. Of course, there is no advertising whatsoever nor any letters to the editor disagreeing with him or commenting on anything else. Each issue of this news magazine of

the Lithuanian technical world is arranged in the same order. The cover usually features a photograph of equipment or a prominent personality. There is always an editorial on the first page on some subject of technical or political significance. Then, the standard departments follow: news of technical society meetings on the local, national, and international levels, book reviews, listings of the decrees of the government, and progress reports. A quick rundown on some news items covered will include: equipment, laboratories, methodology, management, marketing, factories, production statistics and processes, sources of chemicals, information problems, and education. The chemical and technical aspects of the following industries are usually covered both quite broadly and in considerable depth: agricultural chemicals, biologicals, baking, dairying, brewing industries, plastics, paper, military, meat packing and other food processing, leather and textile technology, grain, fertilizers, pharmaceuticals, dry cleaning, peat, candy making, natural gas, heavy and fine chemicals, syrup, and oil manufacturing. Thus, anyone reading this news journal regularly will soon obtain a comprehensive knowledge of the scientific and technical activity in Lithuania without actually running the risk of visiting the country at the present time.

SUMMARY

Chemical information developed in Lithuania and printed in Lithuanian is available in a variety of publications. Interdisciplinary periodicals are employed there to a greater extent than in the United States. A table of titles (Table I) has been presented as well as some clues about the nature of the subject matter to be found in the different journals in order to aid potential readers in their selection of specific chemical information.