**Metathesaurus Representation**

**VSABs:**

LNC229

LNC229\_BRADEN\_1988

LNC229\_CAM\_2003

LNC229\_FLACC\_1997

LNC229\_MDS20

LNC229\_MDS30

LNC229\_OASIS\_2002

LNC229\_PHQ\_9\_1999

LNC229\_RHO\_2008

LNC229\_WHO\_2006

**Notes:**

In addition to the LNC SAB, LOINC includes 9 subsources, which are assigned by an algorithm using field 43 (EXTERNAL\_COPYRIGHT\_NOTICE), field 9 (CLASS) and field 7 (METHOD\_TYP). The representation described below apply to elements from all subsources.

**Changes since LNC227:**

**One subsource was removed:**

LNC\_MDS

To clarify version information, the SAB LNC\_MDS has been removed. Its content remains and is divided between the two new sources LNC\_MDS20 and LNC\_MDS30.

**Three subsources were added:**

LNC\_CAM:

Adapted from: Inouye SK, vanDyck CH, Alessi CA, Balkin S, Siegal AP, Horwitz RI. Clarifying confusion: The Confusion Assessment Method. A new method for detection of delirium. Ann Intern Med. 1990; 113: 941-948. Confusion Assessment Method: Training Manual and Coding Guide, Copyright 2003, Sharon K. Inouye, M.D., MPH.

LNC\_MDS20

LNC\_MDS30

LOINC includes data from two versions of the Minimum Data Set (MDS): 2.0 and 3.0. MDS is part of the U.S. federally mandated process for [clinical assessment](http://en.wikipedia.org/w/index.php?title=Clinical_assessment&action=edit&redlink=1) of all residents in [Medicare](http://en.wikipedia.org/wiki/Medicare_(United_States)) or [Medicaid](http://en.wikipedia.org/wiki/Medicaid) certified [nursing homes](http://en.wikipedia.org/wiki/Nursing_homes). This process provides a comprehensive assessment of each resident's functional capabilities and helps nursing home staff identify health problems. MDS is maintained by the Institute of Gerontology, University of Michigan, Ann Arbor, Michigan.

An adjustment to the subsource assignment algorithm resulted in some atoms which were previously “LNC\_MDS20” or “LNC” receiving an SAB of “LNC\_MDS30,” as well as a small number of other changes.

**New Termtype:** OLC

Obsolete Long Common Name (SUPPRESS = O). Previously, all atoms created from field 46, LONG\_COMMON\_NAME, were represented with TTY = LC.

**Seven new classes were added:**

|  |  |
| --- | --- |
| DOC.QUALITY | Quality documents |
| EYE.OCT | Ophthalmology Optical Coherence Tomography (OTC) |
| PANEL.DOC | Documents panels |
| PANEL.EYE | Ophthalmology panels |
| PANEL.PHENX | PhenX Panel |
| PHENX | PhenX |
| PUBLICHEALTH | Public Health |

**Original Files:** The UMLS uses files publically available at [www.loinc.org](http://www.loinc.org), including: “LOINCDB.TXT” (compressed in “LOINCTAB.zip”) and “LOINC\_V229\_MULTI-AXIAL\_HIERARCHY.CSV” (compressed in “LOINC\_V229\_MULTI-AXIAL\_HIERARCHY.zip”) . In addition, the UMLS receives two files to facilitate building the hierarchy. For 2.29, these files were: “LOINC\_PART\_LINKS\_V2-29\_2009-12-30.txt” and “LOINC\_PARTS\_V2-29\_2009-12-30.txt.” Additional information, such as expansions of abbreviations, is extracted from LOINCManual.pdf.

**Overview:**

**Identifiers:**

LOINC Identifiers in the UMLS are generally based on field 1 of LOINCDB.TXT (LOINC\_NUM), or field 1 of LOINC\_PARTS (L\_PART\_ID). For some termtypes, the atom may be associated with multiple LOINC entities. For example, a component may be a part of multiple fully-specified names. In these cases, the atom (e.g. a CN, or Official Component Name), is assigned an MTHU# during Metathesaurus source processing.

CODE: For termtypes LC, LN, LO, LX, OLX, OSN, OOSN: the LOINC \_NUM (field 1) from LOINCDB.TXT

For termtypes LPN, LPDN: the L\_PART\_ID (field 1) from LOINC\_PARTS\_\*.txt

For termtypes CN, CX, HC, HS, LS, SN, SX: an MTHU#, assigned during Metathesaurus source processing.

SAUI: Not Applicable

SCUI: Not Assigned

SDUI: Not Applicable

**Expansions**:

Expanded forms of certain atoms are created during Metathesaurus source processing by applying abbreviation expansions extracted from the LOINC Manual. In these cases, the expanded form is generally assigned the same identifier as its original form. Expansions may also include converting patterns such as “little e” or “super little b” to “e” or “^b” respectively.

**Atoms:**

|  |  |
| --- | --- |
| TTY | ORIGIN |
| CN | Official component name:  CODE = MTHU#, assigned during Metathesaurus source processing; same as CODE for respective CX, SN and SX as applicable.  STR = LOINCDB.TXT field 2, subfield 1 (COMPONENT). |
| CX | Component, with abbreviations expanded  CODE = MTHU#, assigned during Metathesaurus source processing; same as CODE for respective CN, SN and SX as applicable.  STR = Expanded form of LOINCDB.TXT field 2, subfield 1 (COMPONENT). |
| HC | Hierarchical class:  CODE = MTHU#, assigned during Metathesaurus source processing (same as CODE for respective HS).  STR = expanded form of LOINCDB.TXT field 9 for CLASS or expanded form of LOINCDB.TXT field 23 for CLASSTYPE. An additional HC atom, “LOINCCLASSTYPES,” is added during Metathesaurus source processing as a hierarchical placeholder. |
| HS | Short or alternate version of hierarchical term:  CODE = MTHU#, assigned during Metathesaurus source processing (same as CODE for respective HC).  STR = value of LOINCDB.TXT field 9 for CLASS, or value of LOINCDB.TXT field 23 for CLASSTYPE. |
| LC | Long common name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT field 46 (LONG\_COMMON\_NAME) |
| LN | Official fully-specified name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT fields 2-7, concatenated with colons, i.e. F2:F3:F4:F5:F6:F7 |
| LO | Obsolete official fully specified name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT fields 2-7, concatenated with colons, i.e. F2:F3:F4:F5:F6:F7, if field 15 = “DEL”. |
| LPDN | Parts display name:  CODE = LOINC\_PARTS\_\*.txt field 1 (L\_PART\_ID)  STR = LOINC\_PARTS\_\*.txt field 4 (DISPLAY\_NAME)  LPDN atoms are only created for strings containing the pattern “Allergen Mix.” |
| LPN | Parts name:  CODE = LOINC\_PARTS\_\*.txt field 1 (L\_PART\_ID)  STR = LOINC\_PARTS\_\*.txt field 3 (NAME\_CASE\_INSENSITIVE)  An additional LPN, “LOINCPARTS,” is added during Metathesaurus source processing as a hierarchical placeholder. |
| LS | Expanded system/sample type:  CODE = MTHU#, assigned during Metathesaurus source processing  STR = Expanded form of LOINCDB.TXT field 5, subfield 1 (SYSTEM). |
| LX | Expanded obsolete fully specified name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = Expanded form of LOINCDB.TXT fields 2-7, concatenated with colons, i.e. F2:F3:F4:F5:F6:F7, if field 15 is not = “DEL”. |
| OLC | Obsolete long common name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT field 46 (LOINC\_COMMON\_NAME)  SUPPRESS = O  TTY = OLC is assigned if field 15 (STATUS) = “DEL” |
| OLX | Expanded obsolete fully specified name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = Expanded form of LOINCDB.TXT fields 2-7, concatenated with colons, i.e. F2:F3:F4:F5:F6:F7, if field 15 = “DEL”. |
| OOSN | Obsolete official short name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT field 39 (SHORTNAME), if field 15 = “DEL”. |
| OSN | Official short name:  CODE = LOINCDB.TXT field 1 (LOINC\_NUM)  STR = LOINCDB.TXT field 39 (SHORTNAME), if field 15 is not = “DEL”. |
| SN | Official component synonym:  CODE = MTHU#, assigned during Metathesaurus source processing. Same as code for respective CN, CX and SX as applicable.  STR = LOINCDB.TXT field 21 (EXACT\_CMP\_SY) |
| SX | Mixed-case component synonym with expanded abbreviations:  CODE = MTHU#, assigned during Metathesaurus source processing. Same as code for respective CN, CX and SN as applicable.  STR = Expanded form of LOINCDB.TXT field 21 (EXACT\_CMP\_SY). |
| XM | Cross-mapping set:  This data is added during Metathesaurus source processing |

**Attributes:**

Note: In general, attributes that were included in early versions of LOINC have abbreviated ATNs which are not necessarily self-explanatory. For attributes that have been added to LOINC more recently, the UMLS has been able to leverage new features such as longer field lengths, allowing for more descriptive ATNs.

|  |  |
| --- | --- |
| ATN [Description] | Origin |
| COPYRIGHT | LOINCDB.TXT field 43 (EXTERNAL\_COPYRIGHT\_NOTICE) |
| CURATED\_RANGE\_AND\_UNITS | LOINCDB.TXT field 49 (CURATED\_RANGE\_AND\_UNITS) |
| DEFINITION\_DESCRIPTION\_HELP | LOINCDB.TXT field 51 |
| DOCUMENT\_SECTION | LOINCDB.TXT field 50 |
| EXAMPLE\_UCUM\_UNITS | LOINCDB.TXT field 52 |
| EXAMPLE\_UNITS | LOINCDB.TXT field 44 |
| FROMRSAB | This data is added during Metathesaurus source processing |
| FROMVSAB | This data is added during Metathesaurus source processing |
| HL7\_FIELD\_SUBFIELD | LOINCDB.TXT field 42 |
| HL7\_V2\_DATATYPE | LOINCDB.TXT field 47 |
| HL7\_V3\_DATATYPE | LOINCDB.TXT field 48 |
| INPC\_PERCENTAGE | LOINCDB.TXT field 45 |
| LAL [Answerlist] | LOINCDB.TXT field 14 (ANSWERLIST) |
| LCA [ACSSYM] | LOINCDB.TXT field 27 (ACSSYM) |
| LCB [Chemical base name] | LOINCDB.TXT field 28 (BASE\_NAME) |
| LCD [CDISC common tests] | LOINCDB.TXT field 41 |
| LCL [Class] | LOINCDB.TXT field 9 |
| LCN [Classtype] | LOINCDB.TXT field 23 |
| LCS [Status] | LOINCDB.TXT field 15 |
| LCT [Change type] | LOINCDB.TXT field 12 |
| LEA [Example answers] | LOINCDB.TXT field 26 |
| LFO [Formula] | LOINCDB.TXT field 24 |
| LLR [Date last revised] | LOINCDB.TXT field 11 |
| LMM [Molecular weights] | LOINCDB.TXT field 22 |
| LMP [Map to code] | LOINCDB.TXT field 16 |
| LNC [NAACCR ID] | LOINCDB.TXT field 30 |
| LNE [Code table] | LOINCDB.TXT field 31 |
| LOINC\_COMPONENT | LOINCDB.TXT field 2 (all subfields) |
| LOINC\_METHOD\_TYP | LOINCDB.TXT field 7 |
| LOINC\_PROPERTY | LOINCDB.TXT field 3 |
| LOINC\_SCALE\_TYP | LOINCDB.TXT field 6 |
| LOINC\_SYSTEM | LOINCDB.TXT field 5 |
| LOINC\_TIME\_ASPECT | LOINCDB.TXT field 4 |
| LOR [Order/observation] | LOINCDB.TXT field 40 |
| LPL [Panel elements] | LOINCDB.TXT field 33 |
| LQS [Survey question source] | LOINCDB.TXT field 35 |
| LQT [Survey question text] | LOINCDB.TXT field 34 |
| LRF [Reference] | LOINCDB.TXT field 20 |
| LRN [Related name] | LOINCDB.TXT field 8 |
| LRN2 [Related names 2] | LOINCDB.TXT field 38 |
| LSP [Species] | LOINCDB.TXT field 25 |
| LSU [Submitted units] | LOINCDB.TXT field 37 |
| LUR [Units required] | LOINCDB.TXT field 36 |
| MAPSETRSAB | This data is added during Metathesaurus source processing |
| MAPSETTYPE | This data is added during Metathesaurus source processing |
| MAPSETVERSION | This data is added during Metathesaurus source processing |
| MAPSETVSAB | This data is added during Metathesaurus source processing |
| MTH\_MAPFROMCOMPLEXITY | This data is added during Metathesaurus source processing |
| MTH\_MAPFROMEXHAUSTIVE | This data is added during Metathesaurus source processing |
| MTH\_MAPSETCOMPLEXITY | This data is added during Metathesaurus source processing |
| MTH\_MAPTOCOMPLEXITY | This data is added during Metathesaurus source processing |
| MTH\_MAPTOEXHAUSTIVE | This data is added during Metathesaurus source processing |
| SOS | LOINCDB.TXT field 13  LOINC\_PARTS field 4 (DISPLAY\_NAME) |
| TORSAB | This data is added during Metathesaurus source processing |
| TOVSAB | This data is added during Metathesaurus source processing |
| XMAP | This data is added during Metathesaurus source processing |
| XMAPFROM | This data is added during Metathesaurus source processing |
| XMAPTO | This data is added during Metathesaurus source processing |

**Definitions:**

There are no text definitions released for LOINC or LOINC subsources.

**Relationships:**

|  |  |  |
| --- | --- | --- |
| REL | RELA  inverse\_RELA | Origin |
| CHD  PAR  SIB |  | The hierarchy is extracted from:   * LOINCDB.txt, field 9 (CLASS) and field 23 (CLASSTYPE) * LOINC\_V229\_MULTI-AXIAL\_HIERARCHY.CSV |
| RO | analyzed\_by  analyzes | Connects LS to LN or LO |
| RO | associated\_with | Connects CN to LO or LX with CLASSTYPE of 3 (Claims Attachment). |
| RO | has\_adjustment  adjustment\_of | Connects LPN where PART\_TYPE = "ADJUSTMENT" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_challenge  challenge\_of | Connects LPN where PART\_TYPE = "CHALLENGE" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_class  class\_of | Connects LPN where PART\_TYPE = "CLASS" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_component  component\_of | Connects LPN where PART\_TYPE = "COMPONENT" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_divisor  divisor\_of | Connects LPN where PART\_TYPE = "DIVISORS" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_evaluation  evaluation\_of | Connects CN to LO or LX with CLASSTYPE of 4 (Surveys). |
| RO | has\_fragments\_for\_synonyms  fragments\_for\_synonyms\_of | Connects LPN where PART\_TYPE = "FRAGMENTS FOR SYNONYMS" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_method  method\_of | Connects LPN with PART\_TYPE = "METHOD" with LOINC CODE indicated in LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_property  property\_of | Connects LPN where PART\_TYPE = "PROPERTY" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_scale  scale\_of | Connects LPN where PART\_TYPE = "SCALE" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_suffix  suffix\_of | Connects LPN where PART\_TYPE = "SUFFIX" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_supersystem  supersystem\_of | Connects LPN where PART\_TYPE = "SUPER SYSTEM" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_system  system\_of | Connects LPN where PART\_TYPE = "SYSTEM" with LN or LO, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_time\_aspect  has\_time\_aspect | Connects LPN where PART\_TYPE = "TIME" with LN, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | has\_time\_modifier  time\_modifier\_of | Connects LPN where PART\_TYPE = "TIME MODIFIER" with LN, as per LOINC\_PART\_LINKS\_\*.txt |
| RO | measured\_by  measures | Connects CN to LO or LX with CLASSTYPE of 1 (Laboratory) or 2 (Clinical). |
| RQ | mapped\_from  mapped\_to | Connects an LO with an LN, indicating possible synonymy between a current code and a retired code, as per LOINCDB.TXT field 12 |
| SY | common\_name\_of  has\_common\_name | Connects an LN or LO with its LC or OLC respectively |
| SY | expanded\_form\_of  has\_expanded\_form | Connects original and expanded forms of atoms, including: SX <--> SN; CN <--> CX; LN <--> LX; OLX <--> LO; OSN <--> LN; OOSN <--> LO |

**Mappings**

The Metathesaurus includes mappings between LOINC 2.15 and CPT2005. For more information, please see: <http://www.nlm.nih.gov/research/umls/knowledge_sources/metathesaurus/mapping_projects/loinc.html>

**Source Representation**

**VSABS:**

LNC229

LNC229\_BRADEN\_1988

LNC229\_CAM\_2003

LNC229\_FLACC\_1997

LNC229\_MDS20

LNC229\_MDS30

LNC229\_OASIS\_2002

LNC229\_PHQ\_9\_1999

LNC229\_RHO\_2008

LNC229\_WHO\_2006

1. General notes and comments
2. Summary of changes
3. Summary of source-provided files
4. Details on format of input files and representation of source data

I.  Notes

1. Summary of changes in this version:

See above.

1. Summary of source-provided files:

The complete LOINC distribution includes the following:

|  |  |
| --- | --- |
| Documentation and Reference | |
| LOINC\_ReleaseNotes.txt | Release notes, updated with each LOINC version |
| LOINCManual.pdf | The complete documentation, including tables used to expand abbreviations |
| Data Files | |
| LOINCDB.TXT | Primary LOINC data files |
| LOINC\_PARTS\_V2-29\_2009-12-30.txt | Parts names and codes |
| LOINC\_PART\_LINKS\_V2-29\_2009-12-30.txt | Part links, for relationships (?) and hierarchy |
| LOINC\_V229\_MULTI-AXIAL\_HIERARCHY.CSV | The records in this file represent nodes of the hierarchy, whether LOINC Parts or full LOINC codes. The ordered sequence at any level of the hierarchy is given by the SEQUENCE field. Top level nodes in the hierarchy are those where PATH\_TO\_ROOT is null. This is a "Comma Separated Value" text file. |

Not included:

LOINCDB.TXT: fields that are for internal (LOINC) use are not processed for the Metathesaurus. Fields that are not used are indicated by “Not used” in the “Representation” columns below.

1. Details on format of input files and representation of source data. Consult the LOINC documentation for additional details.

**file: LOINCDB.TXT**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Field** | **Description** | **Representation** |
| 1 | LOINC\_NUM | Unique Code; format is #####-# | MRCONSO.CODE |
| 2 | COMPONENT | Fields 2-7 contain the six parts of the name. The fully-specified name for a given LOINC code is constructed by concatenating the contents of these fields, inserting a colon (“:”) between each element. | * First segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LN or LO * First segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * Subfield 1 = MRCONSO.STR, TTY = CN * MRCONSO.STR, TTY = CX (subfield 1, with expansions) * Entire field: MRSAT.ATN = LOINC\_COMPONENT |
| 3 | PROPERTY | * Second segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LN or LO * Second segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * MRSAT.ATN = LOINC\_PROPERTY |
| 4 | TIME\_ASPCT | * Third segment of colon-separated fully-specifie name, MRCONSO.STR, TTY = LN or LO * Third segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * MRSAT.ATN = LOINC\_TIME\_ASPECT |
| 5 | SYSTEM | * Fourth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LN or LO * Fourth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * First subfield: MRCONSO.STR, TTY = LS (with expansions) * MRSAT.ATN = LOINC\_SYSTEM |
| 6 | SCALE\_TYP | * Fifth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LN or LO * Fifth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * MRSAT.ATN = LOINC\_SCALE\_TYP |
| 7 | METHOD\_TYP | * Sixth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LN or LO * Sixth segment of colon-separated fully-specified name, MRCONSO.STR, TTY = LX or OLX (with expansions) * MRSAT.ATN = LOINC\_METHOD\_TYP * Used in the subsource assignment algorithm |
| 8 | RELAT\_NMS | Field no longer maintained. Replaced by field 38, RelatedNames2 | MRSAT.ATN = LRN |
| 9 | CLASS | Arbitrary classification of the terms for grouping related observations together. See Table 21 in the LOINC Users’ Guide for values. | * MRCONSO.STR, TTY = HS * MRCONSO.STR, TTY = HC (with expansions) * MRSAT.ATN = LCL * Used to build hierarchy * Used in the subsource assignment algorithm |
| 10 | SOURCE | Internal use only | Not used |
| 11 | DT\_LAST\_CH | Date last changed; format is YYYYMMDD | MRSAT.ATN = LLR |
| 12 | CHNG\_TYPE | Change Type Code: DEL = delete (deprecate); ADD = add; NAM = change to Analyte/Component (field #2); MAJ = change to name field other than #2 (#3 - #7); MIN = change to field other than name; UND = undelete | MRSAT.ATN = LCT |
| 13 | COMMENTS | Free-text comments relating to the test result | MRSAT.ATN =SOS |
| 14 | ANSWERLIST | Contents of this field have been moved to structured lists which may be viewed using RELMA | MRSAT.ATN = LAL |
| 15 | STATUS | Deprecated or superseded status indicated by DEL | * For records with STATUS = “DEL,” an obsolete TTY is assigned, and MRCONSO.SUPPRESS = O * MRSAT.ATN = LCS |
| 16 | MAP\_TO | For codes with status=”DEL”, contains the LOINC code of the new term that should be used | * Used to create mapped\_to relationships between LN and LO atoms * MRSAT.ATN = LMP |
| 17 | SCOPE | Not currently used | Not used |
| 18 | CONSUMER\_NAME | Consumer-friendly name for this term. Content is experimental (beta). | Not used |
| 19 | IPCC\_UNITS | Moved; can be viewed in details screen in RELMA. | Not used |
| 20 | REFERENCE | References to medical literature, product announcements or other written sources. | MRSAT.ATN=LRF |
| 21 | EXACT\_CMP\_SY | Exact synonym for the “core component” of the component name. | * MRCONSO.STR, TTY=SN * MRCONSO.STR, TTY=SX (with expansions) |
| 22 | MOLAR\_MASS | Molecular weights, contributed by IUPAC | MRSAT.ATN = LMM |
| 23 | CLASSTYPE | 1=Laboratory; 2=Clinical class; 3=Claims attachments; 4=Surveys | * MRCONSO.STR, TTY = HC * MRCONSO.STR, TTY = HS (with expansions) * MRSAT.ATN = LCN * Used to build hierarchy |
| 24 | FORMULA | Regression equation details | MRSAT.ATN = LFO |
| 25 | SPECIES | Indicates which non-human species this code applies to | MRSAT.ATN = LSP |
| 26 | EXMPL\_ANSWERS | Examples of valid answers | MRSAT.ATN = LEA |
| 27 | ACSSYM | Chemical name synonyms, alternative names and chemical formulae, supplied by CAS | MRSAT.ATN = LCA; an attribute is created for each comma-separated value in this field |
| 28 | BASE\_NAME | Chemical base name from CAS | MRSAT.ATN = LCB |
| 29 | FINAL | Internal LOINC use | Not used |
| 30 | NAACCR\_ID | North American Association of Central Cancer Registries Identification Number | MRSAT.ATN = LNC |
| 31 | CODE\_TABLE | Examples on CR0050 Cancer Registry | MRSAT.ATN = LNE |
| 32 | SETROOT | Indicates that this record is the root of a set of LOINC codes | Not processed |
| 33 | PANELELEMENTS | No longer maintained | LPL |
| 34 | SURVEY\_QUEST\_TXT | Question from survey instrument | MRSAT.ATN = LQT |
| 35 | SURVEY\_QUEST\_SRC | Name of survey instrument and item/question number | MRSAT.ATN = LQS |
| 36 | UNITS\_REQUIRED | Y/N indicates whether units are required for OBX segment in a HIPAA attachment | MRSAT.ATN = LUR |
| 37 | SUBMITTED\_UNITS | Moved to RELMA | MRSAT.ATN = LSU |
| 38 | RELATEDNAMES2 | Synonyms for each part of the fully-specified LOINC name (component, property, time, system, scale, method) | MRSAT.ATN = LRN2 |
| 39 | SHORTNAME | Concatenation of the fully-specified LOINC name | MRCONSO.STR, TTY = OSN, OOSN |
| 40 | ORDER\_OBS | Defines term as an order only, observation only, both, or Subset | MRSAT.ATN = LOR |
| 41 | CDISC\_COMMON\_TESTS | Y indicates member of subset used by CDISC in clinical trials | MRSAT.ATN = LCD |
| 42 | HL7\_FIELD\_SUBFIELD\_ID | Indicates that the content should be delivered in the named field/subfield of the HL7 message. | MRSAT.ATN = HL7\_FIELD\_SUBFIELD |
| 43 | EXTERNAL\_COPYRIGHT\_NOTICE | External copyright holder information | * MRSAT.ATN = COPYRIGHT * Used in the subsource assignment algorithm |
| 44 | EXAMPLE\_UNITS | Indicates representative units | MRSAT.ATN = EXAMPLE\_UNITS |
| 45 | INPC\_PERCENTAGE | Percent of overall result volume within the INPC | MRSAT.ATN = INPC\_PERCENTAGE |
| 46 | LONG\_COMMON\_NAME | Readable version of LOINC term | MRCONSO.ATN = LC, OLC |
| 47 | HL7\_V2\_DATATYPE | HL7 version 2.x datatype | MRSAT.ATN = HL7\_V2\_DATATYPE |
| 48 | HL7\_V3\_DATATYPE | HL7 version 3.0 datatype | MRSAT.ATN = HL7\_V3\_DATATYPE |
| 49 | CURATED\_RANGE\_AND\_UNITS | List of normal ranges and associated units | MRSAT.ATN = CURATED\_RANGE\_AND\_UNITS |
| 50 | DOCUMENT\_SECTION | Classification of whether this code can be used as a full document, section of a document, or both | MRSAT.ATN = DOCUMENT\_SECTION |
| 51 | DEFINITION\_DESCRIPTION\_HELP | Similar to comments; describes term and how to use it. | MRSAT.ATN = DEFINITION\_DESCRIPTION\_HELP |
| 52 | EXAMPLE\_UCUM\_UNITS | Example units of measure expressed as UCUM units | MRSAT.ATN = EXAMPLE\_UCUM\_UNITS |

**File: LOINC\_PARTS:**

|  |  |  |
| --- | --- | --- |
| **#** | **Field** | **Representation** |
| 1 | L\_PART\_ID | MRCONSO.CODE |
| 2 | PART\_TYPE | Values are: ADJUSTMENT, CHALLENGE, CLASS, COMPONENT, COUNT, DIVISORS, FRAGMENTS FOR SYNONYMS, METHOD, MULTI-AXIAL, MULTIPART, PROPERTY, QUOTIENTS, SCALE, SUFFIX, SUPER SYSTEM, SUPERCLASS, SUPERSYSTEMMULTI-AXIAL,  SYSTEM, TIME, TIME MODIFIER  Parts with PART\_TYPE of MULTIPART, QUOTIENTS, or SUPERCLASS are not included in Metathesaurus source processing; used to create relationships between LOINC PARTS and LOINC IDs. |
| 3 | NAME\_CASE\_INSENSITIVE | MRCONSO.STR, TTY = LPN |
| 4 | DISPLAY\_NAME | * MRCONSO.STR, TTY = LPDN (only DISPLAY\_NAME values that contain the pattern “Allergen Mix” are included as LPDN atoms * MRSAT.ATN = SOS |
| 5 | SHORT\_NAME\_MIXED\_CASE | Not used |

**File: LOINC\_PART\_LINKS**

|  |  |  |  |
| --- | --- | --- | --- |
| # | Field | Description | Representation |
| 1 | LOINC\_NUM | LOINC CODE | A relationship (STYPE = “CODE”) is created between the LOINC CODE and the LOINC PART. The REL = RO;  The RELA is assigned based on the LOINC\_PARTS.PART\_TYPE of the L\_PART\_ID as follows:   |  |  | | --- | --- | | PART\_TYPE | RELA  inverse\_RELA | | ADJUSTMENT | has\_adjustment  adjustment\_of | | CHALLENGE | has\_challenge  challenge\_of | | CLASS | has\_class  class\_of | | COMPONENT | has\_component  component\_of | | DIVISORS | has\_divisor  divisor\_of | | FRAGMENTS FOR SYNONYMS | has\_fragments\_for\_synonyms  fragments\_for\_synonyms\_of | | METHOD | has\_method  method\_of | | PROPERTY | has\_property  property\_of | | SCALE | has\_scale  scale\_of | | SUFFIX | has\_suffix  suffix\_of | | SUPERSYSTEM | has\_supersystem  supersystem\_of | | SYSTEM | has\_system  system\_of | | TIME | has\_time\_aspect  time\_aspect\_of | | TIME MONITOR | has\_time\_monitor  time\_monitor\_of |   Note: No PARTS with PART TYPEs of “COUNT,” “MULTI-AXIAL” and “SUPERSYSTEMMULTI-AXIAL” appear in the current “LOINC\_PART\_LINKS” file, therefore no relationships are created for those PART TYPE values. |
| 2 | L\_PART\_ID | LOINC PART CODE |
| 3 | LINK\_TYPE | Value is always “1” | Not processed |

**File: LOINC\_MULTI-AXIAL\_HIERARCHY**

|  |  |  |
| --- | --- | --- |
| **#** | **Field** | **Representation** |
| 1 | PATH\_TO\_ROOT | Used to create the hierarchy tree under the “LOINCPARTS” concept |
| 2 | SEQUENCE | Not used |
| 3 | IMMEDIATE\_PARENT | Not used |
| 4 | CODE | The identifier of the “child” concept; all end nodes are LOINC IDs; ancestors are LOINC PARTs |
| 5 | CODE\_TEXT | Not used |