



National Cooperative Soil Survey Soil Characterization Database (NCSS-SCD) Data Content Standard

December 2025

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Foreword

This document is the data content standard for the National Cooperative Soil Survey Soil Characterization Database (NCSS-SCD) and helps to fulfill one of many responsibilities of federal agencies and cooperators specified in the [Geospatial Data Act \(GDA\)](#) and other federal policies such as the Office of Management and Budget Circular [A-16](#). It conforms to the Federal Geographic Data Committee (FGDC) geographic information framework template ([FGDC-STD-014-2008](#)), which includes information such as terms, definitions, symbols, requirements, diagrams, code lists, and references. The purpose of this standard is to document the data structure, definitions, and other essential metadata so that the content of the information is unambiguous for users. Standards are best management practices for organizations that deliver authoritative data; therefore, other data providers can adopt this standard's format to streamline data collection and analysis. This standard is intended to be a living document. Therefore, feedback is expected and encouraged from interested parties. Suggestions should be directed to the [National Cooperative Soil Survey Standards Committee](#) and the [FGDC Soils Theme](#).



Introduction

The National Cooperative Soil Survey's Soil Characterization Database (NCSS-SCD) contains soil laboratory data for more than 65,000 locations (i.e., XY coordinates) throughout the United States and its Territories, and approximately 2,100 locations from other countries. It is a compilation of data from the Kellogg Soil Survey Laboratory (KSSL) and several cooperating laboratories (Flach and Holzhey, 2002; Fortner and Price, 2011; Wilson et al., 2008). The National Soil Survey Center (NSSC) is data steward and distributor. Information contained within the database includes physical, chemical, biological, mineralogical, morphological, and mid-infrared (MIR) reflectance soil measurements, as well as a collection of calculated values. The intended use of the data is to support soil survey interpretations and inform soil use and management.

A full suite of soil analyses have not been conducted for all samples at each location and depth. Typically, a subset of measurements was collected based upon assumed or known conditions regarding the soil being analyzed. For example, soils of arid environments are routinely analyzed for salts and carbonates as part of the standard analysis suite. Standard morphological soil descriptions are available for about 60,000 of these locations. MIR measurements are available for about 7,000 locations. Soil fertility measurements, such as those made by agricultural experiment stations, were not made. Overall, the number of measurements recorded per location has increased over time. Traditionally, the data were collected to represent a soil series or map unit component concept. The data may also have been sampled to determine the range of variation within a given landscape or soil parent material.

Data presented in the NCSS-SCD typically originates via the following process:

1. The soil is sampled in the field, and its layers are described. Layers may be sampled by horizon or depth interval using standard techniques described in the "Field Book for Describing and Sampling Soils" (Soil Survey Staff, 2024). Samples are shipped to the KSSL or one of several cooperator laboratories.
2. An analysis plan defining which analyses are to be completed is submitted with the samples.
3. Laboratory analysis is conducted with a review of all data for quality control with reruns of analyses conducted as needed.
4. Completed analyses are reviewed by NRCS soil scientists for completeness and validation.
5. Quality-controlled values are committed to the database.
6. Several database formats are available for download on the NCSS Lab Data Mart website and are updated at the end of each month.

Scope

The data in the NCSS-SCD standard represent soil laboratory data collected by soil scientists from multiple federal agencies and NCSS partner organizations (primarily universities). The data provide quality analytical soil information to NRCS field offices and conservation partners in support of the NCSS and the Soil Survey Geographic Database (SSURGO) and related information that support conservation planning. The NCSS-SCD data may or may not represent the central concept of a soil

series or map unit soil component depending on the purpose of the sampling project and what soil properties it investigated and provided data for. However, many of the soil pedons sampled tend to estimate the range of soil properties within a soil series or a landscape. Where possible, the data are used to develop and support the range in characteristics for a soil series or soil components in the SSURGO data products and soil databases. The data have been used as training data for research projects and developing digital soil maps.

Users are responsible for the assessment of the accuracy and applicability of the data. The database has not been edited to remove all the erroneous or sometimes misleading data. For research purposes, all such data are retained in the database. Users who are unfamiliar with a given soil may want to consult a knowledgeable soil scientist to determine how well the data represent a particular soil type or soil series.

Conformance

The NCSS-SCD includes a data dictionary (Annex B) based on the conceptual data model schema (Annex A) presented in this standard. To conform to this part of the Geographic Information Framework Data Content Standard, the tables within the NCSS-SCD must match the definitions in the data dictionary and use the same table relationships illustrated in the data model schema.

Normative references

Annex A, B, and C list normative references applicable to two or more parts of the standard. Informative references applicable only to the Soil Laboratory Information part are listed in Annex D.

Maintenance authority

Level of responsibility

The FGDC is the responsible organization for coordinating work on all parts of the Geographic Information Framework Data Content Standard. The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), working with the FGDC, is directly responsible for development and maintenance of the Geographic Information Framework Data Content Standard, Part 2: Soil Laboratory Information.

Contact information

Address questions concerning this part of the standard to:

Soils Hotline

U.S. Department of Agriculture, Natural Resources Conservation Service,
National Soil Survey Center
1121 Lincoln Mall, Suite 230
Lincoln, NE 68508 USA

Telephone: (402) 437-5379

Email address: soilshotline@usda.gov

or



Kellogg Soil Survey Laboratory
U.S. Department of Agriculture, Natural Resources Conservation Service,
National Soil Survey Center
1121 Lincoln Mall, Suite 230
Lincoln, NE 68508 USA

Online resource: [National Soil Survey Center Employee Directory](#)

Terms and definitions

Projects

A project represents a group of related soil samples that are submitted from USDA NRCS soil survey offices for analytical characterization in support of the NCSS, government entities, partner organizations, private companies, and others to the KSSL for a purpose.

Sites

A site represents a specific geographic location and extent around a sampling area. Site-level information captures the geographic locations of the soil samples submitted for a project. Multiple soil pedons may be sampled within a given site.

Pedons

A soil pedon represents a collection of related soil observations that have been sampled from the same location but at different depths. The labpedon table (B.13) links the soil layers together and provides additional data that are shared between layers. A site and pedon will often correspond with a project, but there can be other types of projects as well. For example, there may be projects where a full pedon or soil profile was not described, but samples were taken for a specific depth to investigate a specific soil property without sampling the full depth range of the soil profile (e.g., grab samples).

Layers

A layer or horizon is a horizontal division of the soil that is morphologically similar. A layer is always part of a project and has a geographic location and a layer depth identifying where in the soil profile it was sampled. These layers may be described in horizon nomenclature and analyzed as a whole, or the sampling may follow a specified range of depth increments that start from the soil surface. When describing a pedon, the layer or soil horizons identified typically follow morphologic soil horizon definitions (Soil Survey Staff, 2024). One or more soil samples may be sent to the laboratory from a given layer as preparations for specific analyses.

Samples

A sample refers to the physical quantities of material submitted to be analyzed as part of a project. A sample must belong to a layer, which describes where the sample came from within a soil profile or pedon.

Preparations

Each analysis performed requires the sample material to be in a specific condition or undergo a specific preparation. The term preparation specifies the steps that are performed on a sample to prepare it for analysis, such as drying and weighing. The preparations used are dependent on the groups of analyses requested to be run on a sample. There can be multiple specific preparations for similar analytical methods.

Procedures

Laboratory procedures define the method by which an analysis is performed. It is well defined and follows a series of sequential steps. They are devised, written, and posted on the [KSSL Guidance web page](#). Procedures are coded for easy reference.

Batches

A batch is a collection of prepared samples that are analyzed as a group or unit. Each batch may be interspersed with check samples used for quality control. If the check samples do not produce expected results, then the whole batch cannot be trusted and must be rerun.

Instrumentation

The KSSL typically has more than one instrument of the same model to allow for a higher workload capacity. A batch may be analyzed on any of these instruments with the knowledge that the results are equivalent. The technician chooses which instrument will be used when the analysis is performed. The instrument information associated with each batch is tracked for quality control purposes.

Analyses

Analyses refer to a particular soil measurement (e.g., pH or H₂O). In most cases, analyses are method (i.e., procedure) dependent; therefore, analyses are generally equivalent to procedures. However, there are many cases where a particular analyses can be measured using various procedures, such as extractable calcium, which use different instruments or titrations.

Analytes

Analytes are the raw values measured from analyses.

Results

Results are the measured or calculated property values derived from data measured in an analysis of samples.

Calculations

Some results are estimations or calculations derived from measured data. Where used, the calculation equations and default values are defined for these results.

Symbols, abbreviated terms, and notations

The following symbols, abbreviations, and notations are applicable to the Soil Laboratory Information Part 2. Abbreviated terms and notations applicable to multiple parts are



- CMS – Conversational Monitor System
- NASIS – National Soil Information System
- KSSL – Kellogg Soil Survey Laboratory
- LDM – Lab Data Mart
- LIMS – laboratory information management system
- MLRA – major land resource area
- NCSS – National Cooperative Soil Survey
- NHQ – National Headquarters
- NSMC – National Soil Mechanics Center
- NSSC – National Soil Survey Center
- SDA – Soil Data Access
- SCD – Soil Characterization Data
- SSIR – Soil Survey Investigations Report
- SSL – Soil Survey Laboratory (previous name of the KSSL)
- NSSL – National Soil Survey Laboratory (previous name of the KSSL)

Requirements

General

The full description of the database structure, relationships, and lookup tables can be found in Annexes A, B, and C. The information in the following sections provides additional context to the tables found in the annexes.

Data table organization

The database tables are broadly organized into four categories: data object tables (site, pedon, and layer), results tables, lookup tables, and metadata tables. The first three categories of tables and the primary key relationships used to relate them are shown in figure 1.

The labcombinenasisncss table provides the link between the field descriptions of the soil profiles stored in the National Soil Information System (NASIS) database to the related layer and results tables stored in the NCSS-SCD. The preferred keys to use in navigating the data are the pedonkey column to get from higher tables to the lablayer table and the layerkey column to get from the lablayer table to any of the results tables.

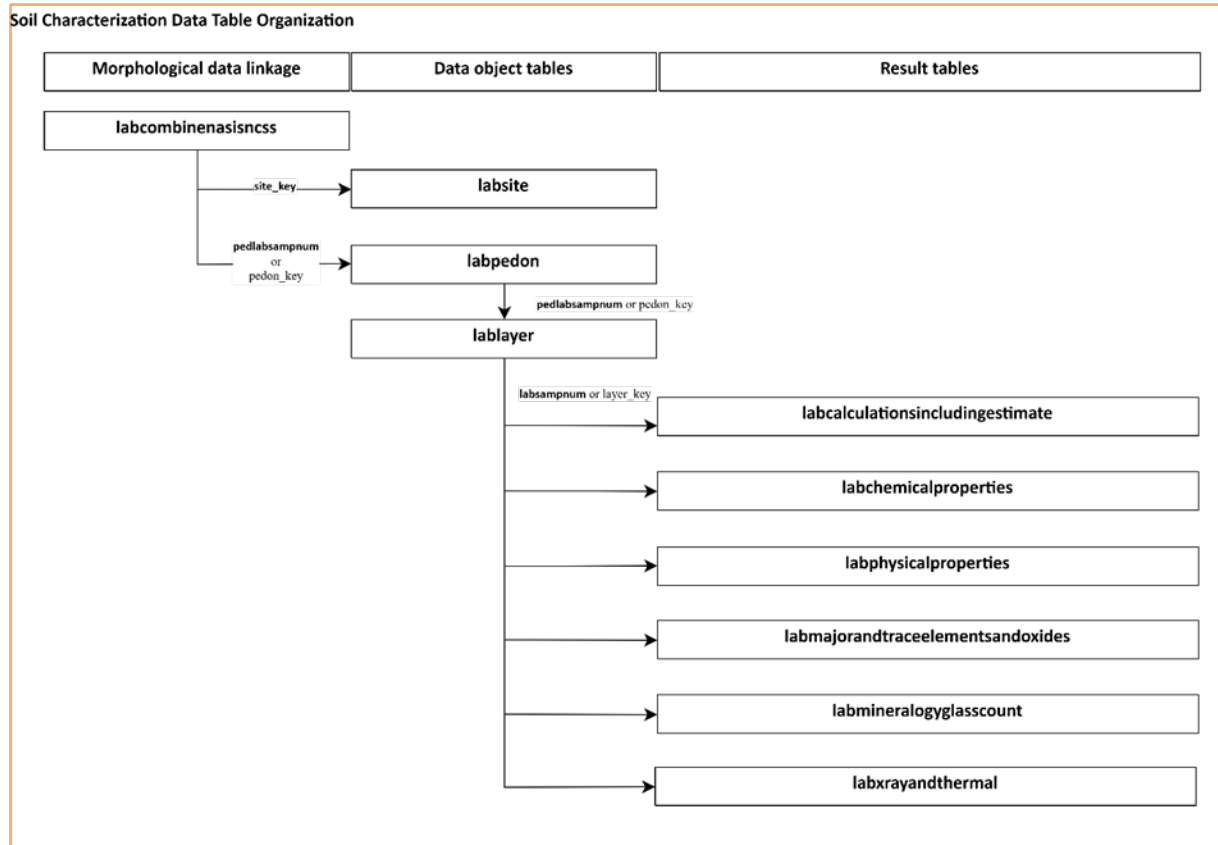


Figure 1.—Data table organization.

Data object relationships

The data in the NCSS-SCD comprise a series of hierarchical tables (i.e., nested objects) that provide the physical context for the analytical results related to soil laboratory project submissions. All nested tables should be linked to a higher-level table. Data object relationships are shown in figures 2 and 3.

As shown in figure 2, projects are submitted with a particular investigative focus on a related set of soil layers within pedons and sites. There may be multiple soil pedons sampled that are related to the same site. Samples can also be related to a project outside of the context of a soil pedon, but all samples will always be related to a site and should have an associated geographic coordinate location.

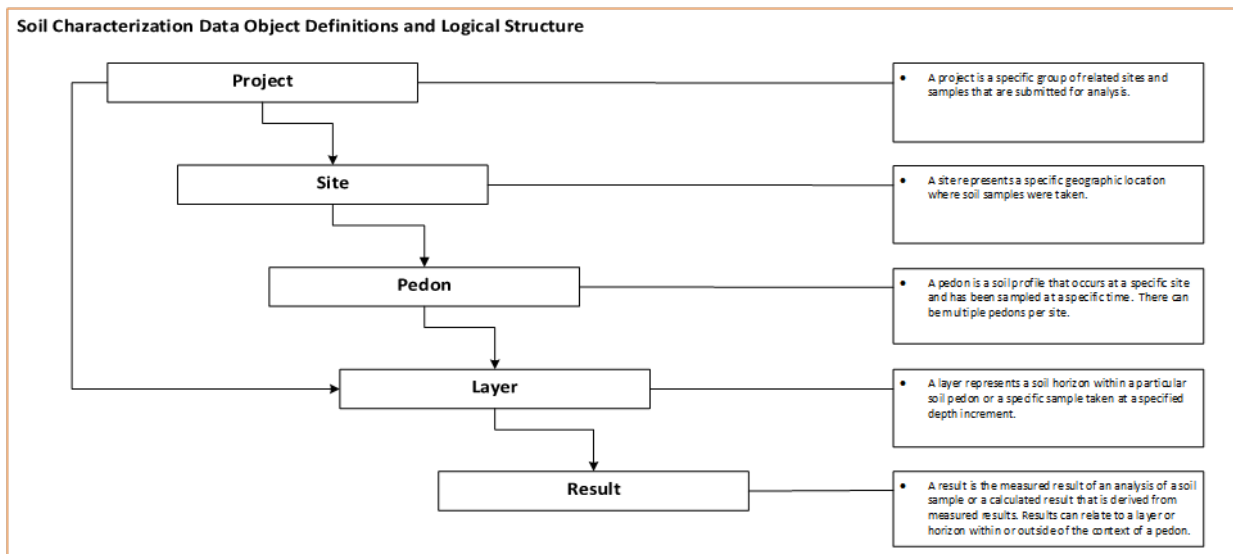


Figure 2.—Data object relationships.

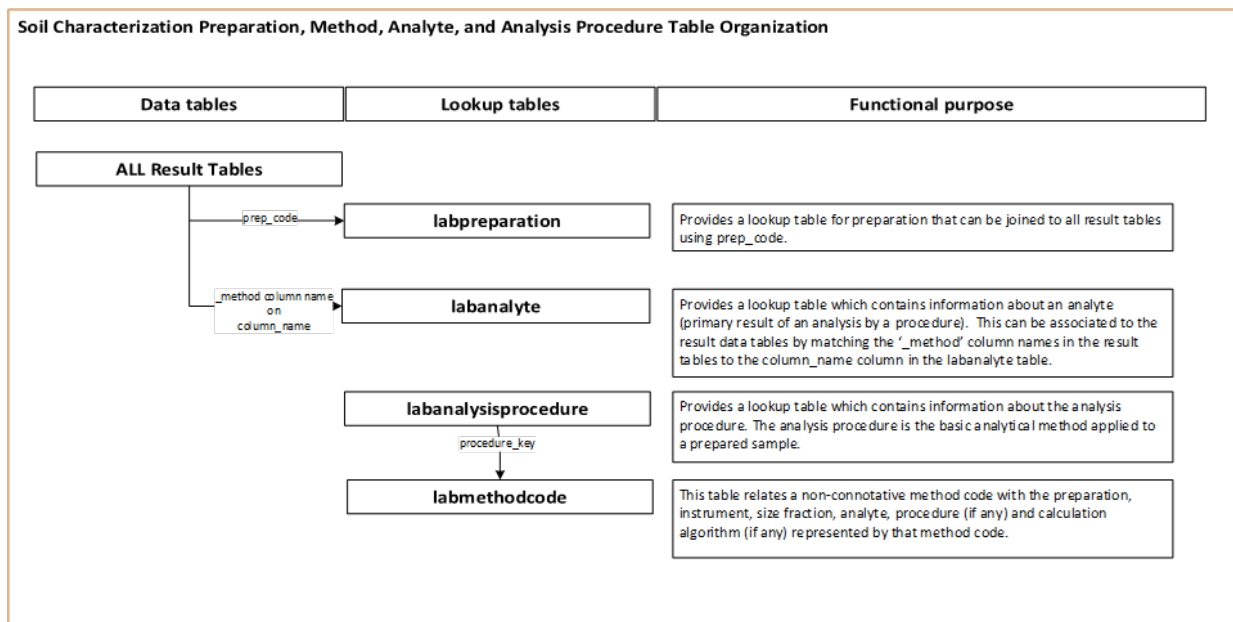


Figure 3.—Preparation, method, analyte, and analysis procedure table relationships.

Data definitions

Definitions for each table and variable can be found in Annex B.

CodeList tables

The database includes three CodeLists (i.e., lookup tables) that provide metadata, such as laboratory methods, geographic areas, and other classification systems. Data for these CodeLists are found in Annex C and can be joined to other database tables (see Annex A for linkages). For example, the labarea table can be joined with the labcombinenasiscnss table to find the geographic extent (e.g., county, state, or national forest) for each site. Note that a soil survey area code is a concatenation of a U.S. state Federal Information Processing Standards (FIPS) code, except where it overlaps extensive areas, such as national forests. Since this table is intended to record only U.S. and U.S. Territory soil survey areas,

every soil survey area code in this table should be unique. The relationship of the CodeLists and their functional purpose are shown in figures 3 and 4.

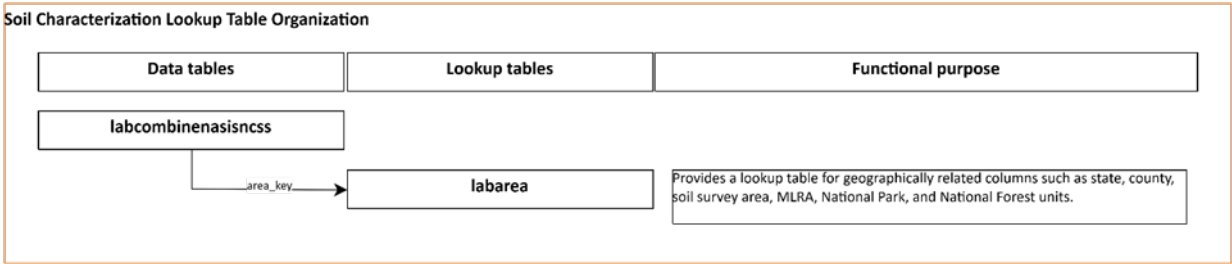


Figure 4.—CodeList table relationships.

Constraints

Details on the variable constraints can be found within the database in the MetadataTableColumn table, which includes information on each variable’s particular data type and in a quarter of cases, limitations on their minimum and maximum limits (e.g., percent, pH, density, length, or ratio). Annex B includes the full description of each table and specifies which variables are mandatory, conditional, or optional. For example, each laboratory measurement should have an associated procedure code recorded for metadata purposes to compare results from different methods.

Pedon horizon depth and sample vertical orientation

Data at each pedon location include measurements for samples taken at multiple depths (e.g., soil horizons or soil layers). The orientation of the depths is measured from the surface (i.e., 0 centimeters) to the lowest depth observed (e.g., 150 centimeters). For each layer, this requires the measurement of both a top and bottom depth (e.g., 0 to 5 centimeters). Additionally, depths should conform to the following conditions: not be missing, not be equal for the same horizon, not have gaps between horizons, have bottom depths greater than top depths, not have negative depths (e.g., organic horizons), or not have depths that overlap. Examples of depths that do not conform to said criteria are shown in figure 5.

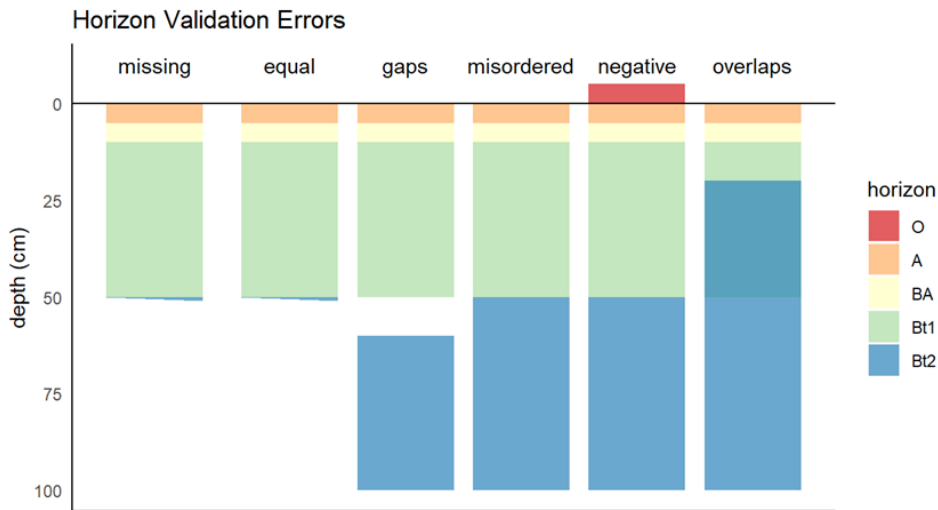


Figure 5.—Examples of potential soil horizon validation errors.

Geographic coordinates

Most of the data were obtained over the last 40 years, with about 4,000 locations before 1960, 25,000 from 1960–1990, 27,000 from 1990–2010, and 13,000 from 2010–2021. The accuracy of the geographic coordinates has not been quantified but, in some cases, can be inferred from the precision of their decimal degrees and the presence of a map datum. When plotted, some older records may show geographic coordinates that correspond to a county or public land survey system section centroid. When the map datum is missing, it can be assumed that data prior to 1990 was recorded using NAD 27 and WGS 84 after 1995. All data are presented with WGS 84 Standard latitude and longitudinal coordinates. No accounting for XY location accuracy has been made or included with the data.

Generally, data in the NCSS-SCD dataset should have geographic coordinates associated with each project, site, and pedon. However, in some cases, these coordinates may be withheld for the following reasons: to prevent the disturbance of sensitive sites, to temporarily allow the data originators the first right to publish, to respect the rights of sovereign nations, or to compile with Section 1619 of the 2008 Farm Bill.

Source system of laboratory methods

Method source system usage in the NCSS-SCD dataset can be traced back to the following cooperator laboratories: KSSL, Auburn University, Iowa State University, Kansas State University, Michigan Technological University, North Dakota State University, Ohio State University, Pennsylvania State University, Purdue University, Texas A&M University, University of Arkansas, University of California, Davis, University of Florida, University of Idaho, University of Illinois, University of Kentucky, University of Massachusetts, University of Minnesota, University of Missouri, Virginia Tech, and West Virginia University.

Data accuracy

Although strict quality-control measures are applied, the NSSC does not guarantee that the data are error-free. In some cases, the measurements may not be within the applicability range of the laboratory methods. For example, dispersion of clay may be incomplete in some soils by the standard method used for determining particle-size distribution. Soils producing incomplete dispersion include those that are derived from volcanic materials or that have a high content of iron oxides, gypsum, carbonates, or other cementing materials. Determinations of clay minerals by x-ray diffraction are on a relative count basis. Measurements of very high or very low quantities by any method are not very precise. Other measurements may have other limitations in some kinds of soil. Such data are retained in the database for research purposes. Some of the data were obtained from cooperating laboratories within the NCSS and therefore may vary more or less than those analyzed by the KSSL.

Limitations of use

This dataset is not designed for use as a primary regulatory tool in permitting or citing decisions but may be used as a reference source. This is public information and may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application. Federal, state, or local regulatory bodies are not to reassign to the NRCS or the NCSS any authority for the decisions that they make. The NRCS will not perform any evaluations of these data for purposes related solely to state or local regulatory programs.

Annex A: Codelist for framework soil laboratory information

Entity relationship diagram and database schema

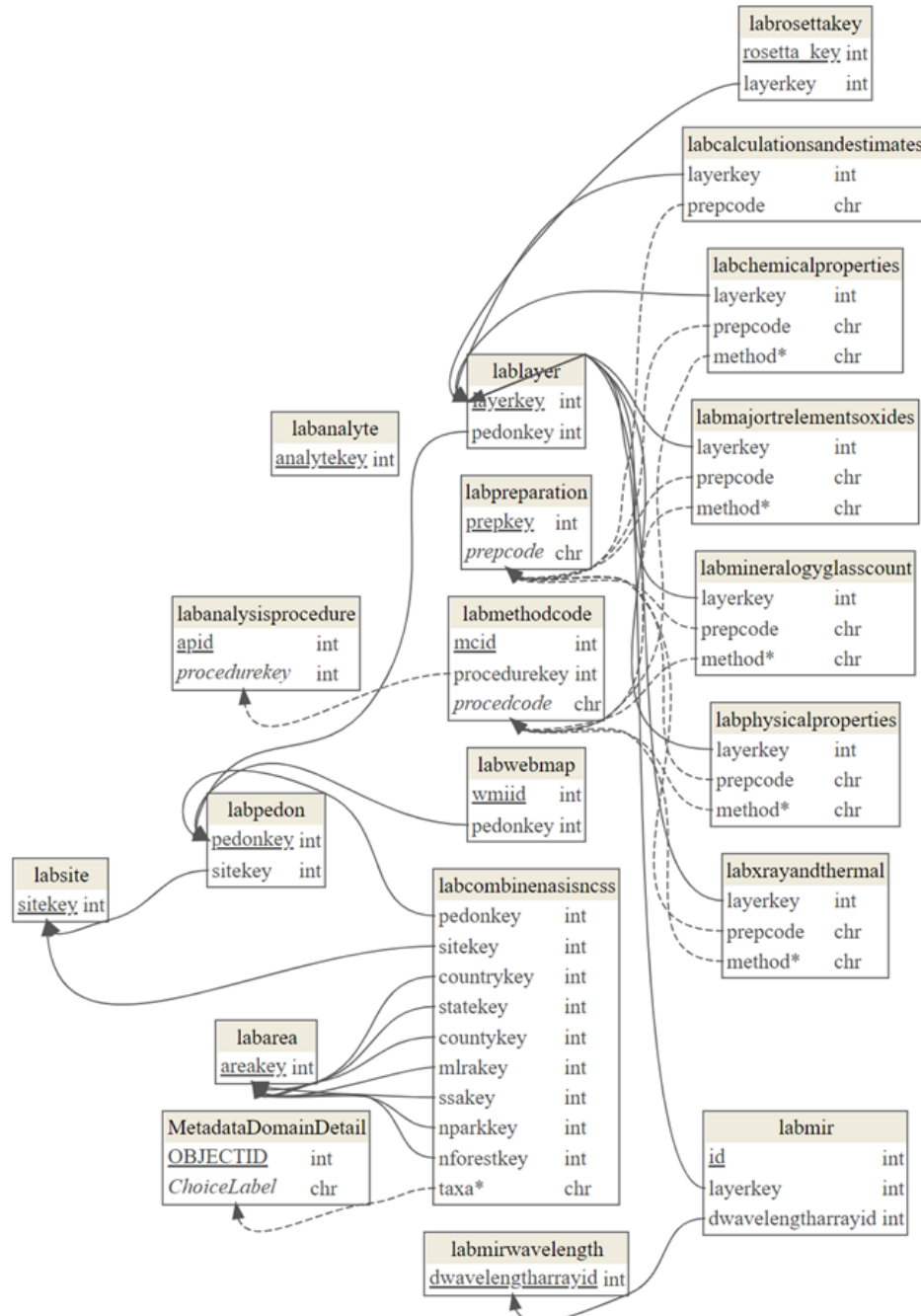


Figure A-1.—Entity relationship diagram of the NCSS-SCD. Tables that include the foreign key method* refer to numerous columns whose analyte names are appended with method (e.g., particlesizemethod). Tables that include the foreign key taxa* refer to multiple taxonomic columns that match multiple values in the MetadataDomainDetail table.

Entity relationship diagram and metadata schema

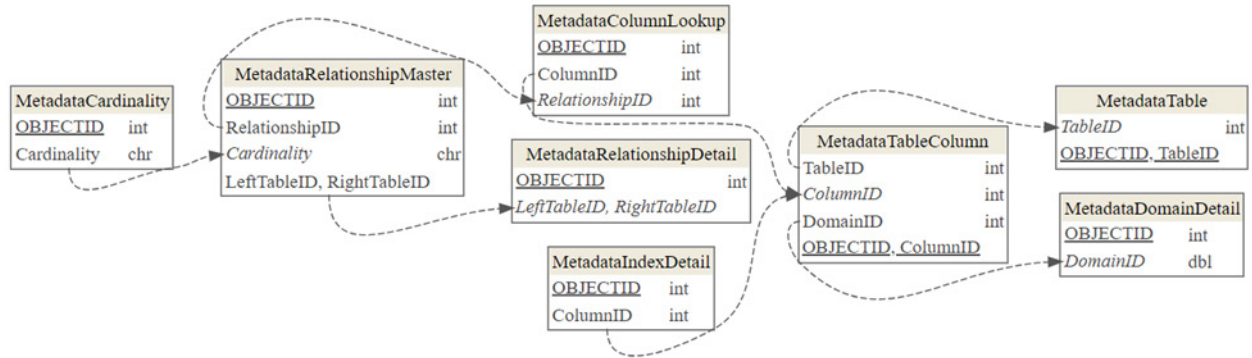


Figure A-2.—Entity relationship diagram of the metadata tables for the NCSS-SCD.

Annex B: Data Dictionaries

Data dictionary for labanalysisprocedure

The labanalysisprocedure table is a lookup table that contains information about the analyses and procedures. They identify the basic analytical method applied to a prepared sample. A procedure may be applied to different sample preparations. An analysis may have more than one procedure, of which an analyst is likely to only perform one.

Table B-1.—Data dictionary for the labanalysisprocedure table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1	apid	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record. It is also known as part (or all) of the primary key. This value is managed by NASIS and cannot be edited.	O	*	Integer	Unrestricted
2	linkstossir42v5	Hyperlinks to the Kellogg Soil Survey Laboratory Methods Manual, Soil Survey Laboratory Investigations Report No. 42.	O	*	Character	Unrestricted
3	notes	Notes describing decisions, issues, or other history related to the record.	O	*	Character	Unrestricted
4	pdfpg	A page the method is located on.	O	*	Integer	Unrestricted
5	procedabbrev	A character string containing the procedure abbreviation.	O	*	Character	Unrestricted
6	proceddesc	A character string containing the procedure analyte description, a long narrative of the procedure analyte.	O	*	Character	Unrestricted
7	procedname	A character string containing the SSL name of the procedure.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
8	procedurekey	An integer number that uniquely identifies a particular procedure, which is used internally by LIMS. The procedure ID is the primary key of the Procedure table. Procedures are the analytical processes used to produce analyte values for an analysis. Several different procedures may be applicable to an analysis.	O	*	Integer	Unrestricted
9	requestedanalname	A character string containing the requested analysis name at the layer level of the requested analysis. This does not necessarily follow the status at the sample level.	O	*	Character	Unrestricted
10	ssir5page	Soil Survey Field and Laboratory Methods Manual page number.	O	*	Integer	Unrestricted

Data dictionary for labanalyte

The labanalyte table is a lookup table that contains information about an analyte, the raw values measured from analyses. It includes information about the analyte, such as its description, units, codes, aggregation method, and calculation method.

Table B-2.—Data dictionary for the labanalyte table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
11	analyteabbrev	A character string containing the analyte abbreviation, the short name given to a particular analyte (reportable result).	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
12	analyteaggmethod	A character string containing the general scheme by which multiple observations are aggregated in the generation of a particular analytical result. Typically, the aggregation method is a simple average of multiple values.	O	*	Character	Unrestricted
13	analytealgorithm	A text field containing the description of a particular calculation algorithm. The calculation algorithm may be particularly complex. The description explains the calculation in more detail than the calculation description.	O	*	Character	Unrestricted
14	analytecode	A character string containing the analyte code is an SSL assigned code which identifies a particular analyte. The code is a formative element of the method code, reported with the analyte result.	O	*	Character	Unrestricted
15	analytedatatype	A character string containing the physical data type of a column in the LIMS database.	O	*	Character	Unrestricted
16	analytedesc	A character string containing the description of the analyte. Some analytes have special meaning in soil characterization, which is different than the conventional analytical meaning.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
17	analyteformat	A character string containing the recording format of the procedure analyte. The format is generally one greater than the significant figure for the calculation. This was done to reduce rounding errors when the analyte is used in other calculations. The final reporting format is specified in the layer analyte table.	O	*	Character	Unrestricted
18	analytekey	An integer number that uniquely identifies an analyte, which is used internally by LIMS. The analyte ID is the primary key of the Analyte table. The analyte is the property or substance that is determined by analysis.	O	*	Integer	Unrestricted
19	analytename	A character string containing the name of the analyte used by the SSL. The analyte is a property or analytical result derived from raw data.	O	*	Character	Unrestricted
20	analytesizefracbase	A character string containing the particle-size distribution used or measured in the analysis or preparation. Special Note: For version 1.0 of Lab SDA Data Mart, the domain associated with this attribute depends on table context. For all tables other than opt_count_mas_data, the domain size_fraction is used. For table opt_count_mas_data, the domain mineral_size_fraction is used.	O	*	Character	Unrestricted

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
21	analytesourcetype	A character string from a choice list, containing the type which indicates whether the analyte is a layer or pedon.	O	*	Character	Unrestricted
22	analytetype	A character string from a choice list, containing the general class assigned by the SSL to the procedure analyte. Procedure analytes may be developmental, reportable, or non-reportable.	O	*	Character	Unrestricted
23	columnname	A character string containing the physical name of a column in the LIMS database.	O	*	Character	Unrestricted
24	uomabbrev	A character string containing the unit of measure abbreviation.	O	*	Character	Unrestricted

Data dictionary for labarea

The labarea table is a lookup table that contains a list of valid NRCS geographic areas, both current and obsolete, for country, county, soil survey and MLRA areas. Note that a soil survey area code is a concatenation of a U.S. state FIPS code and a three-digit soil survey area number. Since this table is intended to record only U.S. and U.S. Territory soil survey areas, every soil survey area code in this table should be unique.

Table B-3.—Data dictionary for the labarea table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
25	areaabbrev	The abbreviated form for an area.	O	*	Character	Unrestricted
26	areacode	A symbol that uniquely identifies a single occurrence of a particular type of area (e.g., Lancaster Co., Nebraska, is NE109).	O	*	Character	Unrestricted
27	areadesc	Metadata information on when a row was added.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
28	areakey	A nonconnotative string of characters used to uniquely identify a record in the lab area table.	O	*	Integer	Unrestricted
29	areaname	The name given to the specified geographic area.	O	*	Character	Unrestricted
30	areasubtype	A text entry is identified by its kind, category, and subcategory. Subtype is the second highest division of classification. Text subtype provides a grouping of text entries according to their subject matter.	O	*	Character	Unrestricted
31	areatype	The record ID (an integer number) of a particular record (component record, horizon record, etc.) in a particular table (component table, horizon table, etc.). A record ID is not sufficient in and of itself to uniquely identify a record in a table. Each record in a table is uniquely identified by the combination of a record ID and the ID of the database in which the entity (area type, legend, or data mapunit), of which the record is a member, was created.	O	*	Character	Unrestricted
32	parentareakey	A record ID (i.e., integer) that refers to the parent areakey (e.g., state) for the current record (e.g., county). It is used to refer to child records that are geographically nested within parent records.	O	*	Integer	Unrestricted
33	parentorgkey	The key of a record whose child records for a particular child table have already been requested to be loaded in the editor.	O	*	Integer	Unrestricted

Data dictionary for labcalculationsandestimates

The labcalculationsandestimates table contains the results of calculations using measured, estimated, and default values.

Table B-4.—Data dictionary for the labcalculationandestimates table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
34	bulkdensity3rdbarforcalc	Bulk density 1/3 bar for calculations Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
35	bulkdensity3rdbarsource	Bulk density 1/3 bar for source.	O	*	Character	Unrestricted
36	bulkdensityovendryws	Bulk density, whole soil, ovendry is the weight per unit volume of the whole soil, with volume measured on ovendry natural fabric (clods). It is reported as grams per cubic centimeter on a whole soil base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
37	bulkdensitysaturatedwholes	The bulk density of saturated whole soil is calculated from the bulk density and water content at 1/3-bar water tension, and the amount of water needed to saturate the 1/3-bar soil. It is reported as grams per cubic centimeter on a whole soil base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
38	bulkdensitythirdbarws	Bulk density, whole soil, 1/3 bar is the weight per unit volume of the soil, with volume being measured after equilibration at 1/3-bar water tension. It is reported as grams per cubic centimeter on a whole soil base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
39	bulkdensitywholesoilmoist	Bulk density, whole soil, moist is the weight per unit volume of the whole soil, with volume measured at field (sampling) moisture in clods. It is reported as grams per cubic centimeter, whole soil base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
40	cumulativecurvelessthan1mm	The cumulative gravimetric percentage of particles with less than 1.0-mm diameter, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted
41	cumulativecurvelt1fourthmm	The cumulative gravimetric percentage of particles with less than 0.25-mm diameter, reported on a less than 3-inch base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
42	cumulativecurvelt1halfmm	The cumulative gravimetric percentage of particles with less than 0.5-mm diameter, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
43	cumulativecurvelt1tenthmm	The cumulative gravimetric percentage of particles with less than 0.10-mm diameter, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
44	cumulativecurvelt5hundredt	The cumulative gravimetric percentage of particles with less than 0.05-mm diameter, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
45	cumulativecurvesizelt10pe	The particle diameter (mm) at which 10 percent (by weight) of the particles in the less than 3-inch base sample are finer (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
46	cumulativecurvesizelt50pe	The particle diameter (mm) at which 50 percent (by weight) of the particles in the less than 3-inch base sample are finer (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
47	cumulativecurvesizelt60pe	The particle diameter (mm) at which 60 percent (by weight) of the particles in the less than 3-inch base sample are finer (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
48	gradationcurvature	The coefficient of curvature is a descriptive parameter calculated from the cumulative grain-size distribution curve (gradation curve). It is used in the Unified Soil Classification System to evaluate grading characteristics of coarse materials.	O	*	Numeric	Unrestricted
49	gradationuniformity	The coefficient of uniformity is a descriptive parameter calculated from the cumulative grain-size distribution curve (gradation curve). It is used in the Unified Soil Classification System to evaluate grading characteristics of coarse materials (less than 75-mm fraction).	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
50	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
51	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted
52	lethirdbartooovendryrewet	Linear extensibility percent, rewet, 1/3 bar to ovdry is the percent length change of a rewet clod as water content changes from ovdry to 1/3 bar tension. It is reported on a less than 2-mm base.	O	*	Numeric	Unrestricted
53	lethirdfifteenwholesoil	Linear extensibility percent, whole soil, 1/3 bar to 15 bar is the percent change in a clod dimension as water content changes from 15 bar to 1/3-bar tension. It is reported as percent length change on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
54	lethirdovendrywholesoil	Linear extensibility percent, whole soil, 1/3 bar to oven dry is the percent change in a clod dimension as water content changes from oven dry to 1/3-bar tension. It is reported as percent length change on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
55	particledensitycalcsour	Particle density calculation source.	O	*	Character	Unrestricted
56	particledensityforcalc	Particle density for calculation.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
57	pctporesdrainedthirdbarws	Drained pores at 1/3-bar tension is the volumetric percent of drained pores at 1/3-bar water tension, reported on a whole soil base. These are defined as noncapillary pores. Unit of measure: percentage.	O	*	Numeric	Unrestricted
58	pctporesfilledthirdbarws	Filled pores at 1/3-bar tension is the volumetric percent of water filled pores at 1/3-bar water tension, reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
59	percentpassing1and1half	This is the cumulative gravimetric percentage of particles passing through a 1.5-inch sieve, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted
60	percentpassing1inchsieve	This is the cumulative gravimetric percentage of particles passing through a 1-inch sieve, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted
61	percentpassing20micronsiev	This is the cumulative gravimetric percentage of particles with diameters less than 20 microns (0.02 mm), reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
62	percentpassing2inchsieve	This is the cumulative gravimetric percentage of particles passing through a 2-inch sieve, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
63	percentpassing2micronsieve	This is the cumulative gravimetric percentage of particles with diameters less than 2 microns (0.002 mm), reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
64	percentpassing3eightsinch	This is the cumulative gravimetric percentage of particles passing through a 3/8-inch sieve, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
65	percentpassing3inchsieve	This is the cumulative gravimetric percentage of particles passing through a 3-inch sieve, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted
66	percentpassing3quarterinch	This is the cumulative gravimetric percentage of particles passing through a 3/4-inch sieve, reported on a less than 3-inch base (less than 75 mm). Unit of measure: percentage.	O	*	Numeric	Unrestricted
67	percentpassing5micronsieve	This is the cumulative gravimetric percentage of particles with diameters less than 5 microns (0.005 mm), reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
68	percentpassingno10sieve	This is the cumulative gravimetric percentage of particles passing through a No. 10 (2.00 mm) sieve, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
69	percentpassingno200sieve	This is the cumulative gravimetric percentage of particles passing through a No. 200 (0.074 mm) sieve, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
70	percentpassingno40sieve	This is the cumulative gravimetric percentage of particles passing through a No. 40 (0.42 mm) sieve, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
71	percentpassingno4sieve	This is the cumulative gravimetric percentage of particles passing through a No. 4 (4.76 mm) sieve, reported on a less than 3-inch base (less than 75-mm base). Unit of measure: percentage.	O	*	Numeric	Unrestricted
72	poresdrainedthirdbarws	Drained pores at 1/3-bar tension is the volumetric percent of drained pores at 1/3-bar water tension reported on a whole soil base. These are defined as noncapillary pores. Unit of measure: percentage.	O	*	Numeric	Unrestricted
73	poresfilledthirdbarws	Filled pores at 1/3-bar tension is the volumetric percent of water filled pores at 1/3-bar water tension reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
74	prepcode	A character string containing the SSL code used to identify the type of sample preparation.	O	*	Character	Unrestricted
75	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
76	voidratiothirdbarlt2mm	The void ratio at 1/3 bar, less than 2 mm is the calculated ratio of pore volume to solids volume at 1/3-bar water tension, reported as a ratio on a less than 2-mm base.	O	*	Numeric	Unrestricted
77	voidratiothirdbarwholesoi	The void ratio at 1/3 bar, whole soil is the calculated ratio of pore volume to solids volume at 1/3-bar water tension, reported as a ratio on a whole soil base.	O	*	Numeric	Unrestricted
78	volpctusdasiltthirdbarws	Particles with 0.002 to 0.05-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
79	volumepect20to75mmthirdbarws	Particles with 20 to 75-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
80	volumepect2to5mmthirdbarws	Particles with 2 to 5-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
81	volume_pct_2to75mm_third_barws	Particles with 2 to 75-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
82	volume_pct_5to20mm_third_barws	Particles with 5 to 20-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
83	volume_pct_75to250mm_third_barws	Particles with 75 to 250-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	M	*	Numeric	Unrestricted
84	volume_pct_gt250mm_third_barws	Particles with greater than 250-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	M	*	Numeric	Unrestricted
85	volume_pct_gt2mm_third_barws	Particles with greater than 2-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percent.	O	*	Numeric	Unrestricted
86	volume_pct_lt2mm_third_barws	Particles with less than 2-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
87	volume_pct_usda_clayws	Particles with less than 0.002-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
88	volumepercentsoil	Particles with 0.05 to 2.0-mm diameter are reported as a volume percent on a whole soil at 1/3-bar water tension base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
89	waterretentiondifference	The volume of water released when the soil is dried from 1/3 bar to 15 bars of water tension. It is reported on a whole soil base as centimeters of water per centimeter depth of soil, but the value is constant for other units. Unit of measure: centimeters per centimeter.	O	*	Numeric	Unrestricted
90	weightpercent20to75mm	The gravimetric percentage of 20 to 75-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
91	weightpercent2to5mm	The gravimetric percentage of 2 to 5-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
92	weightpercent2to75mm	The gravimetric percentage of 2 to 75-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
93	weightpercent5to20mm	The gravimetric percentage of 5 to 20-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
94	weightpercent75to250mm	The gravimetric percentage of 75 to 250-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
95	weightpctlessthan2mmws	The weight fraction of particles with less than 2-mm diameter is reported as a gravimetric percent on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
96	weightpercentgt250mmws	The gravimetric percentage of greater than 250-mm diameter particles is reported on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
97	weightpercentgt2mmws	The weight fraction of particles with greater than 2-mm diameter is reported as a gravimetric percent on a whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
98	wf0175	The gravimetric percentage of 0.1 to 75-mm diameter particles is reported on a less than 75-mm base. Silty families have less than 15 percent, loamy families greater than or equal to 15 percent. Algorithm: $(100 - wf275) * ((sandverycoarse + sandmedium + sandfine + sandcoarse) / 100) + wf275$	O	*	Numeric	Unrestricted
99	wf2075	The gravimetric percentage of 20 to 75 mm diameter particles is reported on a less than 75-mm base.	O	*	Numeric	Unrestricted
100	wf25	The gravimetric percentage of 2 to 5 mm diameter particles is reported on a less than 75-mm base.	O	*	Numeric	Unrestricted
101	wf520	The gravimetric percentage of 5 to 20 mm diameter particles is reported on a less than 75-mm base.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
102	wtpct220mmclayfreews	The gravimetric percent of particles with 2 to 20-mm diameter, reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
103	wtpct275mmclayfreews	The gravimetric percent of particles with 2 to 75-mm diameter, reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
104	wtpctclayclayfree2mmbase	The gravimetric percent of particles with less than 0.002-mm diameter (total clay), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
105	wtpctcsclayfreelt2mmbase	The gravimetric percent of particles with 0.5 to 1.0-mm diameter (coarse sand), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
106	wtpctcsiclayfreelt2mmbase	The gravimetric percent of particles with 0.02 to 0.05-mm diameter (coarse silt), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
107	wtpctfsclayfreelt2mmbase	The gravimetric percent of particles with 0.10 to 0.25-mm diameter (fine sand), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
108	wtpctfsiclayfreelt2mmbase	The gravimetric percent of particles with 0.002 to 0.02-mm diameter (fine silt), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
109	wtptgt2mmclayfreews	The gravimetric percent of particles with greater than 2-mm diameter, reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
110	wtptmsclayfreelt2mmbase	The gravimetric percent of particles with 0.25 to 0.50-mm diameter (medium sand), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
111	wtptcsandclayfreews	The gravimetric percent of particles with 0.05 to 2.0-mm diameter, reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
112	wtptcsiltclayfreews	The gravimetric percent of particles with 0.002 to 0.05-mm diameter, reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
113	wtpttotclayclayfreews	The gravimetric percent of particles with less than 0.002-mm diameter (total clay), reported on a clay free whole soil base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
114	wtptvcscclayfreelt2mmbase	The gravimetric percent of particles with 1.0 to 2.0-mm diameter (very coarse sand), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
115	wtptvfscclayfreelt2mmbase	The gravimetric percent of particles with 0.05 to 0.10-mm diameter (very fine sand), reported on a clay free less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted

Data dictionary for labchemicalproperties

The labchemicalproperties table contains the results of the analysis of chemical properties of the soil measured by the KSSL and cooperating university laboratories.

Table B-5.—Data dictionary for the labchemicalproperties table.

Line	Name/Role Name	Definition	Obligation/Condition	Maximum Occurrence	Data Type	Domain
116	acetatewaterextractable	The acetate anion in the water extract. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
117	aciditybacl2teaph82	Extractable acidity, Barium chloride-triethanolamine (BaCl ₂ -TEA) at pH 8.2, is a measure of the amount of acid neutralized at a set pH. It is a measure of the potential acidity present, and it does not distinguish between exchangeable and nonexchangeable components. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
118	aciditybacl2teaph82method	Extractable acidity, Barium chloride-triethanolamine (BaCl ₂ -TEA) at pH 8.2, is a measure of the amount of acid neutralized at a set pH. It is a measure of the potential acidity present, and it does not distinguish between exchangeable and nonexchangeable components.	O	*	<<CodeList e>> labmethodcode	Unrestricted
119	alammoniumoxalatemethod	Ammonium oxalate extractable aluminum is an estimate of the total pedogenic aluminum, much of which may be in noncrystalline materials or complexed by organic matter. It is reported as gravimetric percent on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
120	aluminumammoniumoxalate	Ammonium oxalate extractable aluminum is an estimate of the total pedogenic aluminum, much of which may be in noncrystalline materials or complexed by organic matter. It is reported as gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
121	aluminumdcextractmethod	Aluminum Dithionite citrate extractable aluminum is an indicator of the amount of aluminum substituted for iron in iron oxides. It does not necessarily represent total pedogenic aluminum.	O	*	<<CodeList e>> labmethodcode	Unrestricted
122	aluminumdithionitecitrate	Dithionite citrate extractable aluminum is an indicator of the amount of aluminum substituted for iron in iron oxides. It does not necessarily represent total pedogenic aluminum. Unit of measure: percentage.	O	*	Numeric	Unrestricted
123	aluminumkclextractable	Potassium chloride extractable aluminum approximates the exchangeable aluminum and is a measure of the active acidity present in soils with a 1:1 water pH less than 5.5. It relates to the immediate lime requirement and the cation-exchange capacity of the soil. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
124	aluminumkclextractmethod	Method for the measured amount of potassium chloride extractable aluminum in the less than 2-mm fraction. It approximates the exchangeable aluminum and is a measure of the active acidity present in soils with a 1:1 water pH less than 5.5.	O	*	<<CodeList e>> labmethodcode	Unrestricted
125	aluminummehlich3extractable	The aluminum extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
126	aluminumnapyrophosphate	Sodium pyrophosphate extractable aluminum is the fraction extracted by 0.1 M sodium pyrophosphate. It was originally considered the portion associated with organic compounds, although subsequent evidence indicates other forms are also removed. Unit of measure: percentage.	O	*	Numeric	Unrestricted
127	aluminumnapyrophosphate met	Sodium pyrophosphate extractable aluminum is the fraction extracted by 0.1 M sodium pyrophosphate. It was originally considered the portion associated with organic compounds, although subsequent evidence indicates other forms are also removed.	O	*	Character	Unrestricted
128	aluminumplushalfironoxalate	The extractable aluminum is added to half of the amount of extractable iron in an ammonium oxalate solution. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
129	aluminumsaturation	Aluminum saturation is calculated by the ratio of 1 N potassium chloride extractable aluminum to the sum of ammonium acetate extractable bases (NH ₄ OAc base) (i.e., (1 N KCl AL)/(NH ₄ OAc bases + 1 N KCl Al)). It provides some inference of potential aluminum toxicity problems, although many other factors influence aluminum toxicity. Unit of measure: percentage.	O	*	Numeric	Unrestricted
130	aluminumwaterextractable	The aluminum extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
131	ammoniumoxalateopticaldensity	Ammonium oxalate optical density is a measure of the light blocking capacity of the extract. It relates to the amount of noncrystalline materials dissolved by the solution. Unit of measure: percentage.	O	*	Numeric	Unrestricted
132	ammoniumoxoptdensmethod	Ammonium oxalate optical density is a measure of the light blocking capacity of the extract. It relates to the amount of noncrystalline materials dissolved by the solution.	O	*	<<CodeList e>> labmethodcode	Unrestricted
133	arsenicmehlich3extractable	The arsenic extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
134	arsenicwaterextractable	The arsenic extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
135	bariummehlich3extractable	The barium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
136	bariumwaterextractable	The barium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
137	basesatnh4oacph7	Ammonium acetate (NH ₄ OAc) base saturation (pH 7.0) is calculated by summing the NH ₄ OAc extractable bases, dividing by the cation exchange capacity at pH 7 (CEC-7), and multiplying by 100 (i.e., NH ₄ OAc bases/CEC-7*100). Unit of measure: percentage.	O	*	Numeric	Unrestricted
138	basesatsumofcationsph82	Base saturation by sum of cations at pH 8.2 is calculated by summing the ammonium acetate exchangeable bases (NH ₄ OAc bases) at pH 7.0, divided by the NH ₄ OAc bases plus the barium chloride-triethanolamine (BaCl ₂ -TEA) exchangeable acidity at pH 8.2, and multiplying by 100 (i.e., NH ₄ OAc bases/(NH ₄ OAc bases + BaCl ₂ -TEA acidity)*100). Unit of measure: percentage.	O	*	Numeric	Unrestricted
139	boronwaterextractable	The boron extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
140	bromidewaterextractable	The bromide extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
141	brsatx	The bromide anion in the saturation extract. Unit of measure: millimoles of charge per liter.	O	*	Numeric	Unrestricted
142	brsatxmethod	The bromide anion in the saturation extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted
143	caco3lt20mm	Carbonate in the less than 20-mm fraction is measured by carbon dioxide evolution after acid treatment. It is reported as gravimetric percent calcium carbonate on a 20-mm base, even though carbonates of magnesium, sodium, potassium, and iron may be present and react with the acid. Unit of measure: percentage.	O	*	Numeric	Unrestricted
144	caco3lt2mm	Carbonate in the less than 2-mm fraction is measured by carbon dioxide evolution after acid treatment. It is reported as gravimetric percent calcium carbonate on a less than 2-mm base, even though carbonates of magnesium, sodium, potassium, and iron may be present and react with the acid. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
145	caco3lt2mmmethod	Carbonate in the less than 2-mm fraction is measured by carbon dioxide evolution after acid treatment. It is reported as gravimetric percent calcium carbonate on a less than 2-mm base, even though carbonates of magnesium, sodium, potassium, and iron may be present and react with the acid.	O	*	<<CodeList e>> labmethodcode	Unrestricted
146	cadmiummehlich3extractable	The cadmium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
147	cadmiumwaterextractable	The cadmium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
148	calciummehlich3extractable	The calcium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
149	calciumwaterextractable	The calcium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
150	canh4ph7	Ammonium acetate (NH ₄ OAc) extractable calcium is the fraction removed by pH 7.0 NH ₄ OAc. It is assumed to represent the exchangeable calcium. It is reported as milliequivalents per 100 grams on a less than 2-mm base. It is not reported for samples containing carbonates or soluble salts. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
151	canh4ph7method	Ammonium acetate (NH ₄ OAC) extractable calcium is the fraction removed by pH 7.0 NH ₄ OAC. It is assumed to represent the exchangeable calcium. It is reported as milliequivalents per 100 grams on a less than 2-mm base. It is not reported for samples containing carbonates or soluble salts.	O	*	<<CodeList e>> labmethodcode	Unrestricted
152	caplusmgsatx	Calcium plus magnesium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalent per liter of extract. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted
153	caplusmgsatxmethod	The product of calcium plus magnesium is used in calculating the soluble salts sodium adsorption ratio.	O	*	<<CodeList e>> labmethodcode	Unrestricted
154	carbonsodiumpyrophosphate	Sodium pyrophosphate extractable carbon was originally thought to correspond to carbon that bound iron and aluminum in spodic materials. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
155	carbontonitrogenratio	The carbon to nitrogen ratio is calculated by dividing the total carbon content (TC) by the total nitrogen content (TN) (i.e., TC/TN). It provides information related to soil fertility and the state of organic matter decomposition. It is reported on a less than 2-mm base.	O	*	Numeric	Unrestricted
156	casatx	Calcium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. Unit of measure: millimoles of charge per liter.	O	*	Numeric	Unrestricted
157	casatxmethod	The saturated paste extract derived from the saturated paste is an important aqueous solution because many soil properties have been related to the composition of the saturation extract (e.g., soluble salt composition, electrical conductivity, and pH).	O	*	<<CodeList e>> labmethodcode	Unrestricted
158	catomgratio	Cation-exchange capacity calcium divided by the cation exchange capacity magnesium.	O	*	Numeric	Unrestricted
159	cecnh4ph7	Cation exchange capacity by ammonium acetate (NH ₄ OAc) is the cation exchange capacity of the sample, determined by 1 N NH ₄ OAc in a system highly buffered at pH 7.0. Unit of measure: milliequivalents per 100 grams.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
160	cecnh4ph7method	Cation exchange capacity by ammonium acetate (NH ₄ OAc) is the cation exchange capacity of the sample, determined by 1 N NH ₄ OAc in a system highly buffered at pH 7.0.	O	*	<<CodeList e>> labmethodcode	Unrestricted
161	chloridewaterextractable	The chloride extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
162	chromiummehlich3extractable	The chromium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
163	chromiumwaterextractable	The chromium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
164	clsatx	Chloride in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. Unit of measure: millimoles of charge per liter.	O	*	Numeric	Unrestricted
165	clsatxmethod	Chloride in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
166	cnapyrophosphatemethod	Sodium pyrophosphate extractable carbon was originally thought to correspond to carbon that bound iron and aluminum in spodic materials. It is reported on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
167	co3plushco3satx	Bicarbonate plus carbonate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted
168	co3plushco3satxmethod	The water-soluble anions that usually are determined in saturation extracts are carbonate, bicarbonate, sulfate, chloride, nitrate, nitrite, fluoride, phosphate, silicate, bromide, and borate. Carbonate and bicarbonate are analyzed by titration.	O	*	<<CodeList e>> labmethodcode	Unrestricted
169	co3satx	Carbonate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract. Unit of measure: millimoles of charge per liter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
170	co3satxmethod	Carbonate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted
171	cobaltmehlich3extractable	The cobalt extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
172	cobaltwaterextractable	The cobalt extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
173	coppermehlich3extractable	The copper extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
174	copperwaterextracable	The copper extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
175	correctedgyplt2mmmethod	The percent gypsum (uncorrected) is used to calculate percent gypsum (corrected).	O	*	<<CodeList e>> labmethodcode	Unrestricted
176	correctedgypsumlt2mm	Corrected gypsum is calculated by multiplying the uncorrected gypsum by a correction factor that accounts for crystal-water content of gypsum. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
177	ececbaseplusaluminum	The effective cation exchange capacity is calculated by the sum of ammonium acetate extractable bases (i.e., NH ₄ OAC bases) plus the 1 N potassium chloride extractable aluminum Al (i.e., NH ₄ OAc bases + 1N KCl Al). It is not calculated if soluble salts are present. Unit of measure: milliequivalents per 100 grams.	O	*	Numeric	Unrestricted
178	ecpredictionetotwo	The salt predicted electrical conductivity is used to determine whether additional salt analyses are needed, and to estimate appropriate dilution ratios for additional tests. It is reported as millimhos per centimeter of a 1:2 soil to water mixture by weight.	O	*	Numeric	Unrestricted
179	ecpredictionetotwomethod	The salt predicted electrical conductivity is used to determine whether additional salt analyses are needed and to estimate appropriate dilution ratios for additional tests. It is reported as millimhos per centimeter of a 1:2 soil to water mixture by weight.	O	*	<<CodeList e>> labmethodcode	Unrestricted
180	ecwaterextract	The electrical conductivity of the water extract solution. Unit of measure: decisiemens per meter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
181	electricalcondsatxmethod	The electrical conductivity of the saturation extract is used to estimate the concentration of the salts in a sample and provides inferences on cation concentration in solution and osmotic pressure. It is reported as millimhos per centimeter.	O	*	<<CodeList e>> labmethodcode	Unrestricted
182	electricalconductivitysatx	The electrical conductivity of the saturation extract is used to estimate the concentration of salts in a sample and provides inferences on cation concentration in solution and osmotic pressure. Unit of measure: decisiemens per meter.	O	*	Numeric	Unrestricted
183	estimatedorganiccarbon	Organic carbon is a measure of all organic forms of carbon in the soil, including organic carbon within minerals. Unit of measure: percentage.	O	*	Numeric	Unrestricted
184	exchangeablesodiumpercentage	This is the percentage of the exchange complex occupied by sodium. If water soluble salts are present, the exchange sodium percentage must be corrected based on sodium present in a saturated extract.	O	*	Numeric	Unrestricted
185	feammoniumoxalateextractable	Ammonium oxalate extractable iron is considered a measure of the noncrystalline iron in soils. It provides some inferences of the amount of iron in various forms. It is reported as gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
186	fedithionitecitrateextract	Dithionite citrate extractable iron is considered a general measure of total pedogenic iron. It provides inferences on the amount of iron in various forms, phosphorus fixing potential, aggregate stability, and degree of weathering. Reported as gravimetric percent on less than 2-mm. Unit of measure: percentage.	O	*	Numeric	Unrestricted
187	fluoridewaterextractable	The fluoride extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
188	fsatx	Fluoride in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	Numeric	Unrestricted
189	fsatxmethod	Fluoride in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
190	gypsumlt20mm	Calcium sulfate as gypsum in the less than 20-mm fraction is reported as a gravimetric percent on a less than 20-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
191	h20satx	Water content of the saturation paste is the gravimetric percent water in a sample prior to collection of the saturation extract. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
192	h20satxmethod	Water content of the saturation paste is the gravimetric percent water in a sample prior to collection of the saturation extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted
193	hco3satx	Bicarbonate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	Numeric	Unrestricted
194	hco3satxmethod	Bicarbonate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
195	ironammoniumoxalatemethod	Ammonium oxalate extractable iron is considered a measure of the noncrystalline iron in soils. It provides some inferences of the amount of iron in various forms. It is reported as gravimetric percent on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
196	irondcextractmethod	Dithionite citrate extractable iron is considered a general measure of total pedogenic iron. It provides inferences on the amount of iron in various forms, phosphorus fixing potential, aggregate stability, and degree of weathering. Reported as gravimetric percent on less than 2 mm.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
197	ironkclextractable	The potassium chloride extractable iron approximates the exchangeable or plant available fraction. It is reported as milligrams per kilogram on a less than 2-mm base.	O	*	Numeric	Unrestricted
198	ironkclextractablemethod	The potassium chloride extractable iron approximates the exchangeable or plant available fraction. It is reported as milligrams per kilogram on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
199	ironmehlich3extractable	The iron extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
200	ironnapyrophosphatemethod	Sodium pyrophosphate extractable iron is assumed to be the fraction associated with organic complexes. It is reported as gravimetric percent on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
201	ironsodiumpyrophosphate	Sodium pyrophosphate extractable iron is assumed to be the fraction associated with organic complexes. It is reported as gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
202	ironwaterextractable	The iron extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
203	knh4ph7	Ammonium acetate (NH ₄ OAc) extractable potassium is the fraction removed by pH 7.0 NH ₄ OAc. It is assumed to represent the exchangeable potassium. It is reported as milliequivalents per 100 grams on a less than 2-mm base. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
204	knh4ph7method	Ammonium acetate (NH ₄ OAc) extractable potassium is the fraction removed by pH 7.0 NH ₄ OAc. It is assumed to represent the exchangeable potassium. It is reported as milliequivalents per 100 grams on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
205	ksatx	Potassium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	Numeric	Unrestricted
206	ksatxmethod	Potassium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
207	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
208	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
209	leadmehlich3extractable	The lead extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
210	leadwaterextractable	The lead extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
211	magnesiummehlich3extractable	The magnesium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
212	magnesiumwaterextractable	The magnesium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
213	manganeseammoniumoxalate	The ammonium oxalate extractable manganese is assumed to be the fraction held in noncrystalline compounds. It is reported as milligrams per kilogram on a less than 2-mm base. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
214	manganesedcextractmethod	Dithionite citrate extractable manganese is considered easily reducible manganese. It is reported as gravimetric percent on a less than 2-mm base. Values greater than 0.2 percent are rare.	O	*	<<CodeList e>> labmethodcode	Unrestricted
215	manganesedithionitecitrate	Dithionite citrate extractable manganese is considered easily reducible manganese. It is reported as gravimetric percent on a less than 2-mm base. Values greater than 0.2 percent are rare. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
216	manganesekclextractable	The potassium chloride extractable manganese approximates the exchangeable or plant available fraction. It is reported as milligrams per kilogram on a less than 2-mm base. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
217	manganesekclextractmethod	The potassium chloride extractable manganese approximates the exchangeable or plant available fraction. It is reported as milligrams per kilogram on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
218	manganesemehlich3extractable	The manganese extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
219	manganesenapyrophosphate	Sodium pyrophosphate extractable manganese is the fraction extracted by 0.1 M sodium pyrophosphate. It was originally considered the portion associated with organic compounds, although subsequent evidence indicates other forms are also removed. Unit of measure: percentage.	O	*	Numeric	Unrestricted
220	manganesewaterextractable	The manganese extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
221	mehlich3extractablemethod	Phosphorus is extracted by reaction with acetic acid and fluoride compounds. Mehlich III is used as an index of available phosphorus in the soil.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
222	melanicindex	Melanic index is an absorbance ratio for melanic Andisols.	O	*	Numeric	Unrestricted
223	melanicindexmethod	Melanic index is an absorbance ratio for melanic Andisols.	O	*	<<CodeList e>> labmethodcode	Unrestricted
224	mgnh4ph7	Ammonium acetate (NH4OAC) extractable magnesium is the fraction removed by pH 7.0 NH4OAC. It is assumed to represent the exchangeable magnesium if magnesium carbonate is not present. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
225	mgnh4ph7method	Ammonium acetate (NH4OAC) extractable magnesium is the fraction removed by pH 7.0 NH4OAC. It is assumed to represent the exchangeable magnesium if magnesium carbonate is not present.	O	*	<<CodeList e>> labmethodcode	Unrestricted
226	mgsatx	Magnesium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	Numeric	Unrestricted
227	mgsatxmethod	Magnesium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
228	mnammoniumoxalatemethod	The ammonium oxalate extractable manganese is assumed to be the fraction held in noncrystalline compounds. It is reported as milligrams per kilogram on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
229	mnnapyrophosphatemethod	Sodium pyrophosphate extractable manganese is the fraction extracted by 0.1 M sodium pyrophosphate. It was originally considered the portion associated with organic compounds, although subsequent evidence indicates other forms are also removed.	O	*	<<CodeList e>> labmethodcode	Unrestricted
230	molybdenummehlich3extractable	The molybdenum extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
231	molybdenumwaterextractable	The molybdenum extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
232	nanh4ph7	Ammonium acetate (NH ₄ OAC) extractable sodium is the fraction removed by pH 7.0 NH ₄ OAC. It is assumed to represent the exchangeable sodium.	O	*	Numeric	Unrestricted
233	nanh4ph7method	Ammonium acetate (NH ₄ OAC) extractable sodium is the fraction removed by pH 7.0 NH ₄ OAC. It is assumed to represent the exchangeable sodium.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
234	nasatx	Sodium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	Numeric	Unrestricted
235	nasatxmethod	Sodium in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
236	newzealandphosphorusretent	The New Zealand phosphorus retention is the gravimetric percent phosphorus removed from a solution by equilibration with a sample. It is reported on a less than 2-mm base. High phosphorus retention indicates andic material. Unit of measure: percentage.	O	*	Numeric	Unrestricted
237	newzealandphosretentmethod	The New Zealand phosphorus retention is the gravimetric percent phosphorus removed from a solution by equilibration with a sample. It is reported on a less than 2-mm base. High phosphorus retention indicates andic material.	O	*	<<CodeList e>> labmethodcode	Unrestricted
238	nickelmehlich3extractable	The nickel extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
239	nickelwaterextractable	The nickel extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
240	nitrate1mkcl	The nitrate is the form of nitrogen is paired with three oxygen atoms. It is extracted by 1 M potassium chloride and represents the soluble nitrate that may be subject to leaching. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
241	nitrate1mkclmethod	The nitrate is the form of nitrogen is paired with three oxygen atoms. It is extracted by 1 M potassium chloride and represents the soluble nitrate that may be subject to leaching.	O	*	<<CodeList e>> labmethodcode	Unrestricted
242	nitratenwaterextractable	The nitrate nitrogen extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
243	nitratewaterextractable	Nitrate in the water extract. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted
244	nitritewaterextractable	Nitrite in the water extract. Unit of measure: milliequivalent per liter.	O	*	Numeric	Unrestricted
245	no2satx	Nitrite in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
246	no2satxmethod	Nitrite in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted
247	no3satx	Nitrate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	Numeric	Unrestricted
248	no3satxmethod	Nitrate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. It is reported as milliequivalents per liter of extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted
249	oacsatx	The acetate anion in the saturation extract. Unit of measure: millimoles of charge per liter.	O	*	Numeric	Unrestricted
250	oacsatxmethod	The acetate anion in the saturation extract.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
251	ocwalkleyblackmethod	Determines soil organic matter—utilizes a specified volume of acidic dichromate solution reacting with a determined amount of soil in order to oxidize the organic matter. (obsolete method)	O	*	<<CodeList e>> labmethodcode	Unrestricted
252	organiccarbonwalkleyblack	Organic carbon is a measure of all organic forms of carbon in the soil, including organic carbon within minerals. Unit of measure: percentage.	O	*	Numeric	Unrestricted
253	phcac12	The pH, 1:2 soil to calcium chloride is the pH of a sample measured in 0.01 M calcium chloride at a 1:2 soil to solution ratio.	O	*	Numeric	Unrestricted
254	phcac12method	The pH, 1:2 soil to calcium chloride is the pH of a sample measured in 0.01 M calcium chloride at a 1:2 soil to solution ratio.	O	*	<<CodeList e>> labmethodcode	Unrestricted
255	phh2o	The pH, 1:1 soil to water suspension is the pH of a sample measured in distilled water at a 1:1 soil to solution ratio. If wider ratios increase the pH, salts are indicated.	O	*	Numeric	Unrestricted
256	phh2omethod	The pH, 1:1 soil to water suspension is the pH of a sample measured in distilled water at a 1:1 soil to solution ratio. If wider ratios increase the pH, salts are indicated.	O	*	<<CodeList e>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
257	phkcl	The pH, 1:1 soil to potassium chloride suspension is the pH of a sample measured in 1 N potassium chloride at a 1:1 soil to solution ratio. If the pH in potassium chloride is less than pH in water, exchangeable aluminum is indicated.	O	*	Numeric	Unrestricted
258	phkclmethod	The pH, 1:1 soil to potassium chloride suspension is the pH of a sample measured in 1 N potassium chloride at a 1:1 soil to solution ratio. If the pH in potassium chloride is less than pH in water, exchangeable aluminum is indicated.	O	*	<<CodeList e>> labmethodcode	Unrestricted
259	phnaf	The pH, 1:50 soil to sodium fluoride suspension is the pH of a sample measured in 1 N sodium fluoride at a 1:50 soil to solution ratio. If sodium fluoride pH is greater than 9.4, andic materials are indicated.	O	*	Numeric	Unrestricted
260	phnafmethod	The pH, 1:50 soil to sodium fluoride suspension is the pH of a sample measured in 1 N sodium fluoride at a 1:50 soil to solution ratio. If sodium fluoride pH is greater than 9.4, andic materials are indicated.	O	*	<<CodeList e>> labmethodcode	Unrestricted
261	phosphatewaterextractable	Phosphate in the water extract. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
262	phosphorousnh4oxalatemet hod	Phosphorus extracted with ammonium oxalate.	O	*	<<CodeList e>> labmethodc ode	Unrestricted
263	phosphorusammoniumoxala te	Phosphorus extracted with ammonium oxalate. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
264	phosphorusanionresin24hr	The phosphorus extracted by shaking resin bag with soil in reverse osmosis deionized water for 24 hours. The phosphorus is removed from resin bags by shaking for 1 hour in 1 M sodium chloride solution.	O	*	Numeric	Unrestricted
265	phosphorusanionresincapaci t	Anion-exchange resin capacity is calculated by adding the reading at 1 hour and the reading at 24 hours. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
266	phosphorusanionresinmeth od	Amounts of phosphorus released from soil and adsorbed by resins have been used as a measure of available phosphorus.	O	*	<<CodeList e>> labmethodc ode	Unrestricted
267	phosphorusanionresinonehr	The phosphorus extracted by shaking resin bag with soil in reverse osmosis deionized water for 1 hour. The phosphorus is removed from resin bags by shaking for 1 hour in 1 M sodium chloride solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
268	phosphorusbray1	This is the phosphorus extractable by the Bray-1 method, reported as milligrams per kilogram on a less than 2-mm base. It is used as an index of plant-available phosphorus. Bray-1 extracts adsorbed phosphorus. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
269	phosphorusbray1method	The phosphorus extracted by the Bray-1 method, reported as milligrams per kilogram on a less than 2-mm base. It is used as an index of plant available phosphorus. Bray-1 extracts adsorbed phosphorus.	O	*	<<CodeList e>> labmethodcode	Unrestricted
270	phosphorusbray2	This is the phosphorus extractable by the Bray-2 method, reported as milligrams per kilogram on a less than 2-mm base. Bray-2 extracts both adsorbed and easily acid-soluble forms of phosphorus. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
271	phosphorusbray2method	The phosphorus extracted by the Bray-2 method, reported as milligrams per kilogram on a less than 2-mm base. Bray-2 extracts both adsorbed and easily acid-soluble forms of phosphorus.	O	*	Character	Unrestricted
272	phosphoruscitricacid	The water soluble phosphorus is the fraction extracted by distilled water. It represents an attempt to approximate the phosphorus concentration in the soil solution (i.e., the mobile phosphorus). Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
273	phosphoruscitricacidmethod	The phosphorus extractable by citric acid is an indicator of available phosphorus in the sample, reported as milligrams per kilogram on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
274	phosphorusmehlich3	The phosphorus extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
275	phosphorusmehlich3extractabl	The phosphorus extracted by the Mehlich III solution.	O	*	Numeric	Unrestricted
276	phosphorusmehlich3method	The phosphorus extracted by the Mehlich III solution.	O	*	<<CodeList e>> labmethodcode	Unrestricted
277	phosphorusolsen	The Olsen extractable phosphorus is used as an indicator of available phosphorus in calcareous soil materials (pH greater than 6). Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
278	phosphorusolsenmethod	The Olsen extractable phosphorus is used as an indicator of available phosphorus in calcareous soil materials (pH greater than 6).	O	*	<<CodeList e>> labmethodcode	Unrestricted
279	phosphoruswater	The water-soluble phosphorus is the fraction extracted by distilled water. It represents an attempt to approximate the phosphorus concentration in the soil solution (i.e., the mobile phosphorus).	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
280	phosphoruswaterextractable	The water-soluble phosphorus is the fraction extracted by distilled water. It represents an attempt to approximate the phosphorus concentration in the soil solution (i.e., the mobile phosphorus). Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
281	phosphoruswatermethod	The phosphorus found in a water sample. It represents the phosphorus concentration in the water (i.e., the mobile phosphorus).	O	*	<<CodeList e>> labmethodcode	Unrestricted
282	phoxidized	The oxidized pH is the pH of a sample measured after incubation while saturated with distilled water. It is normally used to indicate the acid producing potential of acid sulfate materials.	O	*	Numeric	Unrestricted
283	phoxidizedinitial	The initial oxidized pH is the pH of a sample measured before incubation while saturated with distilled water.	O	*	Numeric	Unrestricted
284	phoxidizedmethod	Oxidized pH is used to test for presence of sulfidic material and to predict the occurrence of sulfuric horizons.	O	*	<<CodeList e>> labmethodcode	Unrestricted
285	phsaturatedpaste	The pH, saturated paste is the pH of the solution extracted from the saturated paste sample. It is used as an indicator of the irrigated pH of soils with soluble salts.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
286	phsaturatedpastemethod	The pH, saturated paste is the pH of the solution extracted from the saturated paste sample. It is used as an indicator of the irrigated pH of soils with soluble salts.	O	*	<<CodeList e>> labmethodcode	Unrestricted
287	phwaterextract	The pH, water extract is the pH of the solution extracted from the sample with water. It is used as an indicator of the irrigated pH of soils with water.	O	*	Numeric	Unrestricted
288	phwaterextractmethod	The pH, water extract is the pH of the solution extracted from the sample with water. It is used as an indicator of the irrigated pH of soils with water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
289	po4satx	Phosphate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted
290	po4satxmethod	Phosphate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
291	potassiummehlich3extractable	The potassium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
292	potassiumwaterextractable	The potassium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
293	prepcode	A character string containing the SSL code used to identify the type of sample preparation.	O	*	Character	Unrestricted
294	resistivitisaturatedpaste	Resistivity is the electrical resistance of a saturated soil paste in a standard resistance cup, reported as ohms per centimeter on the less than 2-mm fraction. It is a measure of the amount of soluble salts in the sample. Unit of measure: ohms per centimeter.	O	*	Numeric	Unrestricted
295	resistivityspmethod	Resistivity is the electrical resistance of a saturated soil paste in a standard resistance cup, reported as ohms per centimeter on the less than 2-mm fraction. It is a measure of the amount of soluble salts in the sample.	O	*	<<CodeList e>> labmethodcode	Unrestricted
296	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
297	seleniummehlich3extractable	The selenium extracted by the Mehlich III solution.	O	*	Numeric	Unrestricted
298	seleniumwaterextractable	The selenium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
299	silicaammoniumoxalate	The amount of ammonium oxalate extractable silica relates to the amount of allophane and imogolite in andic materials. It is reported as a gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
300	silicaammoniumoxalatemethod	The amount of ammonium oxalate extractable silica relates to the amount of allophane and imogolite in andic materials. It is reported as a gravimetric percent on a less than 2-mm base.	O	*	<<CodeList e>> labmethodcode	Unrestricted
301	siliconmehlich3extractable	The silicon extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
302	siliconwaterextractable	The silicon extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
303	so4satx	Sulfate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water. Unit of measure: milliequivalents per liter.	O	*	Numeric	Unrestricted
304	so4satxmethod	Sulfate in the saturation extract is the fraction removed from a sample by saturating the sample with distilled water, then vacuum extracting the water.	O	*	<<CodeList e>> labmethodcode	Unrestricted
305	sodiumabsorptionratio	Is the ratio of soluble sodium to the square root of the average of soluble calcium and soluble magnesium (i.e., $Na/\sqrt{(Ca + Mg)/2}$).	O	*	Numeric	Unrestricted
306	sodiummehlich3extractable	The sodium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
307	sodiumwaterextractable	The sodium extracted by the Water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
308	strontiummehlich3extractable	The strontium extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
309	strontiumwaterextractable	The strontium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
310	sulfatewaterextractable	Sulfate in the water extract. It is reported as milliequivalents per liter of extract. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
311	sumofcationscecpH8.2	This is the calculated cation-exchange capacity (i.e., calcium, magnesium, sodium, potassium) plus barium chloride triethanolamine extractable acidity at pH 8.2. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
312	sumofNH4pH7extbases	The sum of ammonium acetate (NH4OAC) extractable bases (i.e., calcium, magnesium, sodium, potassium). It is reported as milliequivalents per 100 grams on a less than 2-mm base. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
313	totalcarbonncs	Total carbon is a measure of all organic and inorganic carbon, including that found in carbonate minerals. Unit of measure: percentage.	O	*	Numeric	Unrestricted
314	totalcarbonncsmethod	Total carbon is a measure of all organic and inorganic carbon, including that found in carbonate minerals.	O	*	<<CodeList >> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
315	totalestimatedsaltssatx	The total estimated salt content of a sample is calculated from the electrical conductivity. It is reported as gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
316	totalnitrogenncs	Total nitrogen is a measure of all organic and inorganic nitrogen, including that found in nitrogen minerals. Unit of measure: percentage.	O	*	Numeric	Unrestricted
317	totalnitrogenncsmethod	Total nitrogen is a measure of all organic and inorganic nitrogen, including that found in nitrogen minerals.	O	*	<<CodeList e>> labmethodcode	Unrestricted
318	totalsulfurncs	Total sulfur is the sum of organic and inorganic forms, reported as a gravimetric percent on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
319	totalsulfurncsmethod	Total sulfur is a measure of all organic and inorganic sulfur, including that found in sulfide minerals.	O	*	<<CodeList e>> labmethodcode	Unrestricted
320	vanadiumwaterextractable	The vanadium extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted
321	waterextractmethod	The method using water to extract cations and anions. Used to mimic the soil solution.	O	*	<<CodeList e>> labmethodcode	Unrestricted

Line	Name/Role Name	Definition	Obligation/Condition	Maximum Occurrence	Data Type	Domain
322	zincmehlich3extractable	The zinc extracted by the Mehlich III solution. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
323	zincwaterextractable	The zinc extracted by the water solution. Unit of measure: micrograms per kilogram.	O	*	Numeric	Unrestricted

Data dictionary for labcombinenasisncss

The labcombinenasisncss table is a linkage between NASIS, pedon morphological, and associated laboratory data. This table stores information about locations, layers, or horizons of a pedon that has had samples submitted to the KSSL at the NSSC or one of the various laboratories at NCSS cooperating universities. Data is periodically transferred from the KSSL database to this table.

Table B-6.—Data dictionary for the labcombinenasisncss table.

Line	Name/Role Name	Definition	Obligation/Condition	Maximum Occurrence	Data Type	Domain
324	corrclassdate	The date this particular classification or correlated taxon name was assigned.	O	*	DateTime	Unrestricted
325	corrclassificationname	A concatenation of the correlated Soil Taxonomy subgroup and family for a soil (long name).	O	*	Character	Unrestricted
326	corrname	Name of a soil that was correlated for the site.	O	*	Character	Unrestricted
327	corrosdtypelocflag	An indicator of whether or not this pedon record is or was used as the typical pedon for the named correlated series.	O	*	Integer	Unrestricted
328	corrtaxceactcl	Correlated cation-exchange activity classes are used as family criteria differentiae. It is the relative cation-exchange activity level of the soil based on the cation-exchange capacity to clay ratio. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
329	corrtaxfamhahatmatcl	Correlated human-altered and human-transported material classes are used as family differentiae. They are intended to provide useful information on the behavior and interpretations for use of soils formed in human-altered or human-transported material. (Keys to Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
330	corrtaxgrtgroup	The third level of Soil Taxonomy. The category is below the suborder and above the subgroup for the correlated taxonomic group.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
331	corrtaxminalogy	Correlated mineralogy classes are used as family differentiae. They are based on the approximate mineralogical composition of selected size fractions of the same segment of the soil (control section) that is used for application of particle-size classes. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
332	corrtaxmoistscl	Correlated soil moisture subclasses identify soil moisture regime intergrades or extragrades, except for typic, and are taxonomic subgroup criteria whether included or not in the name of the subgroup. The definition of each subclass is dependent upon the specific taxonomic great group to which it is attached.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
333	corrtaxonkind	Identifies the kind of taxonomic unit described. Examples are series and miscellaneous areas.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
334	corrtaxorder	The highest level in Soil Taxonomy for the correlated taxonomic order.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
335	corrtaxother	Correlated soil characteristics other than the defined family characteristics of particle-size classes, mineralogy classes, calcareous and reaction classes, and soil temperature classes. These characteristics include depth of soil, consistence, moisture equivalent, slope of soil, and permanent cracks. (Soil Taxonomy)	O	*	Character	Unrestricted
336	corrtaxpartsize	Correlated particle-size classes are used as family differentiae. Particle-size refers to grain-size distribution of the whole soil and is not the same as texture. (Soil Taxonomy).	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
337	corrtaxpartsizemod	Correlated taxonomic family criteria that is used to indicate the presence of more than two strongly contrasting classes in the particle-size control section. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
338	corrtaxreaction	Correlated indicates the presence or absence of carbonates and the reaction. They are treated together because of their intimate relationship and are used to indicate family differentiae. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
339	corrtaxsubgrp	The fourth level of Soil Taxonomy. The subgroup is below great group and above family for the correlated taxonomic subgroup.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
340	corrtaxsuborder	The second level of Soil Taxonomy. The suborder is below the order and above the great group for the correlated taxonomic suborder.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
341	corrtaxtempcl	The correlated taxonomic family temperature class used to construct the official classification name. It may be null when the taxonomic family temperature class is embedded in the classification name. The actual taxonomic temperature regime is recorded in another place.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
342	corrtaxtempregime	Correlated soil temperature regime as defined in Soil Taxonomy.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
343	countrykey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a country. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted
344	countykey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a county. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted
345	labdatadescflag	An indicator of whether or not this pedon record is the one certified for distribution with analytical lab results from the KSSL or other NCSS laboratories.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
346	latitudedecimaldegrees	Standardized latitude value in decimal degrees, in geographic coordinate system, WGS 84 datum. Values are either auto-populated from GPS or computed from original latitude coordinates using standard conversion algorithms.	O	*	Numeric	Unrestricted
347	longitudedecimaldegrees	Standardized longitude value in decimal degrees, in geographic coordinate system, WGS 84 datum. Values are either auto-populated from GPS or computed from original longitude coordinates using standard conversion algorithms.	O	*	Numeric	Unrestricted
348	mlrakey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a major land resource area. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted
349	nforestkey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a national forest. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted
350	note	Notes describing decisions, issues, or other history related to the record.	M	*	Character	Unrestricted
351	nparkkey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a national park. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
352	pedlabsampnum	An identifier for the pedon sample that is assigned by the KSSL. This identifier is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
353	pedobjupdate	The datetime the pedon data object was last updated in NASIS.	O	*	DateTime	Unrestricted
354	pedonkey	An integer number that uniquely identifies a particular pedon.	O	*	Integer	Unrestricted
355	peiid	The record ID (an integer number) of a particular record (component record, horizon record, etc.) in a particular table (component table, horizon table, etc.). A record ID is not sufficient in and of itself to uniquely identify a record in a table. Each record in a table is uniquely identified by the combination of a record ID and the ID of the database in which the entity (area type, legend or data map unit), of which the record is a member, was created.	O	*	Integer	Unrestricted
356	priority	Internal identifier to help determine the most recent pedon. A D means the pedon is a member of the NASIS group KSSL. All other groups are assigned a B. This field is used with the priority 2 field to determine the most recent pedon.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
357	priority2	Internal identifier to help determine the most recent pedon. Pedons with the certified lab data flag checked are assigned an A. All other pedons are assigned a C. This field is used with the priority 1 field to determine the most recent pedon. The certified lab data are an indicator of whether or not this pedon record is the one certified for distribution with analytical lab results from the SSL or other NCSS laboratories.	O	*	Character	Unrestricted
358	sampclassdate	The date this particular classification or sampled taxon name was assigned.	O	*	DateTime	Unrestricted
359	sampclassificationname	A concatenation of the sampled Soil Taxonomy subgroup and family for a soil (long name).	O	*	Character	Unrestricted
360	sampname	Name of a soil that was sampled for the site.	O	*	Character	Unrestricted
361	samposdtypelocflag	An indicator of whether or not this pedon record is or was used as the typical pedon for the named sampled series.	O	*	Integer	Unrestricted
362	samptaxceactcl	The sampled taxonomic cation exchange activity classes are used as family criteria differentiae. It is the relative cation-exchange (CEC) activity level of the soil based on the CEC to clay ratio. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
363	samptaxfamhahatmatcl	The sampled taxonomic human-altered and human-transported material classes are used as family differentiae. They are intended to provide useful information on the behavior and interpretations for use of soils formed in human-altered or human-transported material. (Keys to Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
364	samptaxgrtgroup	The third level of Soil Taxonomy. The category is below the suborder and above the subgroup for the sampled taxonomic group.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
365	samptaxminalogy	The sampled taxonomic mineralogy classes are used as family differentiae. They are based on the approximate mineralogical composition of selected size fractions of the same segment of the soil (control section) that is used for application of particle-size classes. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
366	samptaxmoistscl	The sampled taxonomic soil moisture subclasses identify soil moisture regime intergrades or extragrades, except for typic, and are taxonomic subgroup criteria whether included or not in the name of the subgroup. The definition of each subclass is dependent upon the specific taxonomic great group to which it is attached.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
367	samptaxonkind	Identifies the kind of taxonomic unit described. Examples are series and miscellaneous areas.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
368	samptaxorder	The highest level in Soil Taxonomy for the sampled taxonomic order.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
369	samptaxother	Sampled soil characteristics other than the defined family characteristics of particle-size classes, mineralogy classes, calcareous and reaction classes, and soil temperature classes. These characteristics include depth of soil, consistence, moisture equivalent, slope of soil, and permanent cracks. (Soil Taxonomy)	O	*	Character	Unrestricted
370	samptaxpartsize	Sampled particle-size classes are used as family differentiae. Particle-size refers to grain-size distribution of the whole soil and is not the same as texture. (Soil Taxonomy).	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
371	samptaxpartsizemod	Sampled taxonomic family criteria that is used to indicate the presence of more than two strongly contrasting classes in the particle-size control section. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
372	samptaxreaction	Sampled presence or absence of carbonates and reaction. They are treated together because of their intimate relationship and are used to indicate family differentiae. (Soil Taxonomy)	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
373	samptaxsubgrp	The fourth level of Soil Taxonomy. The subgroup is below great group and above family for the sampled taxonomic subgroup	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
374	samptaxsuborder	The second level of Soil Taxonomy. The suborder is below the order and above the great group for the sampled taxonomic suborder.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
375	samptaxtempcl	The sampled taxonomic family temperature class used to construct the official classification name. It may be null when the taxonomic family temperature class is embedded in the classification name. The actual taxonomic temperature regime is recorded in another place.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
376	samptaxtempregime	Sampled soil temperature regime as defined in Soil Taxonomy.	O	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
377	shape		O	*		Unrestricted
378	siteiid	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record. Also known as part (or all) of the primary key. This value is managed by NASIS and cannot be edited.	O	*	Integer	Unrestricted
379	sitekey	An integer number that uniquely identifies a particular site.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
380	siteobjupdate	The date on which this particular soil was described or sampled, expressed as month, day, year (i.e., mm/dd/yyyy).	O	*	DateTime	Unrestricted
381	siteobsdate	The date on which this particular soil was described or sampled, expressed as month, day, year (i.e., mm/dd/yyyy).	O	*	DateTime	Unrestricted
382	ssakey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a soil survey area. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted
383	sslclassdate	Soil temperature regime as defined in Soil Taxonomy.	O	*	DateTime	Unrestricted
384	sslclassificationname	A concatenation of the Soil Taxonomy subgroup and family for a soil (long name).	O	*	Character	Unrestricted
385	sslname	Name of a soil that was for the site.	O	*	Character	Unrestricted
386	sslosdtypelocflag	An indicator of whether or not this pedon record is or was used as the typical pedon for the named series.	O	*	Integer	Unrestricted
387	ssltaxceactcl	Cation exchange activity classes are used as family criteria differentiae. It is the relative cation exchange (CEC) activity level of the soil based on the CEC to clay ratio. (Soil Taxonomy)	O	*	Character	Unrestricted
388	ssltaxfamhahatmatcl	Human-altered and human-transported material classes are used as family differentiae. They are intended to provide useful information on the behavior and interpretations for use of soils formed in human-altered or human-transported material. (Keys to Soil Taxonomy)	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
389	ssltaxgrtgroup	The third level of Soil Taxonomy. The category is below the suborder and above the subgroup.	O	*	Character	Unrestricted
390	ssltaxminalogy	Mineralogy classes are used as family differentiae. They are based on the approximate mineralogical composition of selected size fractions of the same segment of the soil (control section) that is used for application of particle-size classes. (Soil Taxonomy)	O	*	Character	Unrestricted
391	ssltaxmoistscl	Soil moisture subclasses are taxonomic subgroup criteria, whether included or not in the name of the subgroup. The definition of each subclass is dependent upon the specific taxonomic great group to which it is attached.	O	*	Character	Unrestricted
392	ssltaxonkind	Identifies the kind of taxonomic unit described. Examples are series and miscellaneous areas.	O	*	Character	Unrestricted
393	ssltaxorder	The highest level in Soil Taxonomy.	O	*	Character	Unrestricted
394	ssltaxother	Soil characteristics other than the defined family characteristics of particle-size classes, mineralogy classes, calcareous and reaction classes, and soil temperature classes. These characteristics include depth of soil, consistence, moisture equivalent, slope of soil, and permanent cracks. (Soil Taxonomy)	O	*	Character	Unrestricted
395	ssltaxpartsize	Particle-size classes are used as family differentiae. Particle-size refers to grain-size distribution of the whole soil and is not the same as texture. (Soil Taxonomy).	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
396	ssltaxpartsizemod	Taxonomic family criteria that is used to indicate the presence of more than two strongly contrasting classes in the particle-size control section. (Soil Taxonomy)	O	*	Character	Unrestricted
397	ssltaxreaction	Indicates the presence or absence of carbonates and the reaction. They are treated together because of their intimate relationship and are used to indicate family differentiae. (Soil Taxonomy)	O	*	Character	Unrestricted
398	ssltaxsubgrp	The fourth level of Soil Taxonomy. The subgroup is below great group and above family.	O	*	Character	Unrestricted
399	ssltaxsuborder	The second level of Soil Taxonomy. This category is below the order and above the great group.	O	*	Character	Unrestricted
400	ssltaxtempcl	The taxonomic family temperature class used to construct the official classification name. It may be null when the taxonomic family temperature class is embedded in the classification name. The actual taxonomic temperature regime is recorded in another place.	O	*	Character	Unrestricted
401	ssltaxtempregime	Soil temperature regime as defined in Soil Taxonomy.	O	*	Character	Unrestricted
402	statekey	An internal ID (integer) that is part (or all) of a key that uniquely identifies a record for a state. Also known as part (or all) of the primary key.	O	*	<<CodeListe >> labarea	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
403	upedonid	A unique site identifier for the site being described. It is made up of the concatenation of the calendar year, U.S. FIPS state character code and county numeric code or the soil survey area, and a three-digit consecutive pedon number for the calendar year. An alphanumeric subunit may follow.	O	*	Character	Unrestricted
404	usiteid	A character string containing the user site identifier, which identifies a particular site. This is a convenience provided to easily identify the site by the user. The user in this case is generally the submitter or project coordinator.	O	*	Character	Unrestricted

Data dictionary for lablayer

The lablayer table contains information about the layer, including the field identifier, horizon designation, reporting, and depths. Layer in LIMS can be a true soil horizon or a reporting layer that does not correspond to the traditional soil horizon.

Table B-7.—Data dictionary for the lablayer table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
405	hznbot	The bottom (lower) depth of the layer.	O	*	Numeric	Unrestricted
406	hzndesgn	The concatenation of three kinds of symbols (four data elements) used in various combinations to designate layers within the soil. (Soil Survey Manual)	O	*	Character	Unrestricted
407	hzndesgnold	Horizon designation originally entered in the database.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
408	hzndesgnother	The portion of the horizon designation that did not parse into the regular fields.	O	*	Character	Unrestricted
409	hzndiscontinuity	One of four kinds of symbols that when concatenated are used to distinguish different kinds of layers in soils. A discontinuity is a significant change in particle-size distribution or mineralogy that indicates a difference in the material from which the horizons formed or a significant difference in age, unless that difference in age is indicated by the suffix b. (Soil Survey Manual)	O	*	Integer	Unrestricted
410	hznmaster	One of four kinds of symbols that when concatenated are used to distinguish different kinds of layers in soils. Master horizons and layers are the base symbols to which other characters are added to complete the designations. Capital letters, virgules (forward slashes), and ampersands are used. (Soil Survey Manual)	O	*	Character	Unrestricted
411	hznprime	A character used to indicate that this horizon has an identical horizon designation as some overlying horizon. The two horizons in question are separated by at least one other horizon.	O	*	Character	Unrestricted
412	hzntop	The top (upper) depth of the layer.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
413	hznvertsubdvn	This is the end of the horizon designation. One of the four kinds of symbols that when concatenated are used to distinguish different kinds of layers in soils. Vertical subdivisions, the last of the four pieces, are used to subdivide a horizon or layer designated by a single letter or combination of letters or numbers or letters and numbers.	O	*	Integer	Unrestricted
414	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
415	layerfieldlabel1	The label assigned in the field to the layer.	O	*	Character	Unrestricted
416	layerfieldlabel2	A second label assigned in the field to the layer.	O	*	Character	Unrestricted
417	layerfieldlabel3	A third label assigned in the field to the layer.	O	*	Character	Unrestricted
418	layerkey	An integer number that uniquely identifies a particular layer	O	*	Integer	Unrestricted
419	layersequence	The horizon layer number is a sequential number (starting at one for the top horizon) for horizons in a pedon. It is used to order data in reports.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
420	layertype	The layer type indicates whether the layer is a horizon, layer, or non-layer reporting type. The intent is to allow flexible reporting of data for pedons, projects, or other data groupings.	O	*	Character	Unrestricted
421	nonhzndesgn	A string entered into the horizon field that is not a horizon designation.	O	*	Character	Unrestricted
422	pedonkey	An integer number that uniquely identifies a particular pedon.	O	*	Integer	Unrestricted
423	projectkey	An integer number that uniquely identifies a particular project.	O	*	Integer	Unrestricted
424	sitekey	An integer number that uniquely identifies a particular site.	O	*	Integer	Unrestricted
425	stratifiedtexturesflag	A Boolean flag that when set as Yes indicates that the textures that comprise a particular texture group are stratified.	O	*	Integer	Unrestricted
426	texturedescription	The full texture description for a horizon, using full texture class and in lieu of names rather than abbreviations.	O	*	Character	Unrestricted



Data dictionary for labmajortrelementsoxides

The labmajortrelementsoxides table contains major and trace elements, total oxides, x-ray data, and the method codes related to the methods used.

Table B-8.—Data dictionary for the labmajortrelementsoxides table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
427	aluminummajorelement	Aluminum major element is the total aluminum measured after total dissolution of a size fraction of soil material. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
428	aluminumoxidetotal	Total aluminum is the aluminum measured after total dissolution of a size fraction of soil material. It is stored as percent of the element and reported as percent oxide based on the size fraction used. Unit of measure: percentage.	O	*	Numeric	Unrestricted
429	antimonytraceelement	Antimony trace element is the total antimony measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
430	arsenictraceelement	Arsenic trace element is the total arsenic measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
431	bariumtraceelement	Barium trace element is the total barium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
432	berylliumtraceelement	Beryllium trace element is the total beryllium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
433	cadmiumtraceelement	Cadmium trace element is the total cadmium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
434	calciummajorelement	Calcium major element is the total calcium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
435	chromiumtraceelement	Chromium trace element is the total chromium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
436	cobalttraceelement	Cobalt trace element is the total cobalt measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
437	coppertraceelement	Copper trace element is the total copper measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
438	ironmajorelement	Iron major element is the total iron measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
439	ironoxidetotal	Total iron is the iron measured after total dissolution of a size fraction of soil material. It is stored as elemental percent and reported as percent oxide based on the size fraction used. Unit of measure: percentage.	O	*	Numeric	Unrestricted
440	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
441	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted
442	leadtraceelement	Lead trace element is the total lead measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
443	magnesiummajorelement	Magnesium major element is the total magnesium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
444	majorelementmethod	Elemental concentration of the digest determined using an inductively coupled plasma atomic emission spectrometer.	O	*	<<CodeListe >> labmethodcode	Unrestricted
445	manganesemajorelement	Manganese major element is the total manganese measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
446	manganesetraceelement	Manganese trace element is the total manganese measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
447	mercurytraceelement	Mercury trace element is the total mercury measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
448	molybdenumtraceelement	Molybdenum trace element is the total molybdenum measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
449	nickeltraceelement	Nickel trace element is the total nickel measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
450	phosphorusmajorelement	Phosphorus major element is the total phosphorus measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
451	phosphorustraceelement	Phosphorus trace element is the total phosphorus measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
452	potassiummajorelement	Potassium major element is the total potassium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
453	potassiumoxidetotal	Total potassium is the potassium measured after total dissolution of a size fraction of soil material. It is stored as elemental percent and reported as percent oxide based on the size fraction used.	O	*	Numeric	Unrestricted
454	prepcode	A character string containing the Soil Survey Laboratory code used to identify the type of sample preparation.	O	*	Character	Unrestricted
455	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
456	seleniumtraceelement	Selenium trace element is the total selenium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
457	siliconmajorelement	Silicon major element is the total silicon measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
458	silvertraceelement	Silver trace element is the total silver measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
459	sodiummajorelement	Sodium major element is the total sodium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted
460	strontiummajorelement	Strontium major element is the total strontium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
461	strontiumtraceelement	Strontium trace element is the total strontium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
462	thalliumtraceelement	Thallium trace element is the total thallium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
463	tintraceelement	Tin trace element is the total tin measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
464	titaniummajorelement	Titanium major element is the total titanium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
465	traceelementmethod	Trace elements typically found at low or background levels in the environment, determined by an acid digest and tested on an inductively coupled plasma mass spectrometry.	O	*	<<CodeListe >> labmethodcode	Unrestricted
466	tungstentraceelement	Tungsten trace element is the total tungsten measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
467	vanadiumtraceelement	Vanadium trace element is the total vanadium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted
468	zintraceelement	Zinc trace element is the total zinc measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
469	zirconiummajorelement	Zirconium major element is total zirconium measured after total dissolution of a size fraction of soil material. It is reported as milligrams per kilogram on less than 2-mm fraction. Unit of measure: milligrams per kilogram.	O	*	Integer	Unrestricted

Data dictionary for labmethodcode

The labmethodcode table relates a nonconnotative method code with the preparation, instrument, size fraction, analyte, procedure (if any), and calculation algorithm (if any) represented by that method code.

Table B-9.—Data dictionary for the labmethodcode table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
470	mcid	An integer number that uniquely identifies a method code ID record, which is used internally by LIMS. The method code ID is a primary key to the labmethodcode table.	O	*	Integer	Unrestricted
471	procedabbrev	A character string containing the procedure abbreviation.	O	*	Character	Unrestricted
472	procedcode	A character string containing the SSL code used to identify the procedure. The procedure code is used to link the labmethodcode table to the various results tables (e.g., labphysicalproperties).	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
473	proceddesc	A character string containing the procedure analyte description, a long narrative of the procedure analyte.	O	*	Character	Unrestricted
474	procedname	A character string containing the SSL name of the procedure.	O	*	Character	Unrestricted
475	procedurekey	An integer number that uniquely identifies a particular procedure, which is used internally by LIMS. The procedure ID is the primary key of the Procedure table. Procedures are the analytical processes used to produce analyte values for an analysis. Several different procedures may be applicable to an analysis.	O	*	Integer	Unrestricted
476	requestedanalname	A character string containing the requested analysis name at the layer level of the requested analysis. This does not necessarily follow the status at the sample level.	O	*	Character	Unrestricted
477	sourcesystemkey	Primary key of the original source table.	O	*	Integer	Unrestricted
478	sourcesystemname	The name of a system table.	O	*	Character	Unrestricted

Data dictionary for labmineralogyglasscount

The labmineralogyglasscount table provides the raw data for the sample. The table contains the type of optical count, the size fraction, and replicate number.

Table B-10.—Data dictionary for the labmineralogyglasscount table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
479	acactinolitepetrocount	Quantity of actinolite mineral grains from a total examination of 300 grains in a specific particle-size distribution analysis (PSDA) sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
480	aeanatasepetrocount	Quantity of anatase mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
481	afarfvedsonitepetrocount	Quantity of arfvedsonite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
482	agantigoritepetrocount	Quantity of antigorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
483	ahanthophyllitepetrocount	Quantity of anthophyllite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
484	aiaegirineaugitepetrocount	Quantity of aegirine-augite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
485	alallophanepetrocount	Quantity of allophane mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
486	amamphibolepetrocount	Quantity of amphibole mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
487	analyzedsizefrac	Size fraction of the soil that was observed under the microscope.	O	*	Character	Unrestricted
488	anandalusitepetrocount	Quantity of andalusite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
489	aoaragonitepetrocount	Quantity of aragonite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
490	apapatitepetrocount	Quantity of apatite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
491	auaugitepetrocount	Quantity of augite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
492	ayanhydritepetrocount	Quantity of anhydrite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
493	babaritepetrocount	Quantity of barite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
494	beboehmitepetrocount	Quantity of boehmite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
495	bgbasicglasscount	Quantity of dark-colored glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
496	bgbasicglasspetrocount	Quantity of basic glass mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
497	biotitechloritepetrocount	Quantity of biotite-chlorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
498	bkbrookitepetrocount	Quantity of brookite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
499	brbrucitepetrocount	Quantity of brucite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
500	btbiotitepetrocount	Quantity of biotite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
501	byberylpetrocount	Quantity of beryl mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
502	bzbronzitepetrocount	Quantity of bronzite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
503	cacalcitepetrocount	Quantity of calcite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
504	carbonateaggregatespet roct	Quantity of carbonate aggregates mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
505	cccoalpetrocount	Quantity of coal mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
506	cecobaltitepetrocount	Quantity of cobaltite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
507	chertchalcedonyjasperc ount	Quantity of chert-chalcedony-jasper-agate-onyx mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
508	claycoatedquartzpetroc ount	Quantity of clay-coated quartz mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
509	clchloritepetrocount	Quantity of chlorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
510	bauxitepetrocount	Quantity of bauxite (e.g., cliachite) mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
511	cmchloritemicapetrocount	Quantity of chlorite-mica mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
512	cncorundumpetrocount	Quantity of corundum mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
513	cocollophanepetrocount	Quantity of collophane mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
514	crcristobalitepetrocount	Quantity of cristobalite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
515	ctcassiteritepetrocount	Quantity of cassiterite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
516	cychrysotilepetrocount	Quantity of chrysotile mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
517	czclinozoisitepetrocount	Quantity of clinozoisite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
518	didiatomglasscount	Quantity of diatom glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
519	didiatompetrocount	Quantity of diatom mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
520	dldolomitepetrocount	Quantity of dolomite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
521	dpdiopsidepetrocount	Quantity of diopside mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
522	dudumortieritepetrocount	Quantity of dumortierite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
523	enenstatitepetrocount	Quantity of enstatite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
524	eepidotepetrocount	Quantity of epidote mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
525	faandesitepetrocount	Quantity of andesite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
526	fbalbitepetrocount	Quantity of albite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
527	fcfcmicroclinepetrocount	Quantity of microcline mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
528	fdfeldsparpetrocount	Quantity of feldspar mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
529	fforaminiferapetrocount	Quantity of foraminifera mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
530	fhanorthoclasepetrocount	Quantity of anorthoclase mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
531	flabradoritepetrocount	Quantity of labradorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
532	fmferromagnesiumpetrocount	Quantity of ferromagnesium mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
533	fnanorthitepetrocount	Quantity of anorthite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
534	fooligoclasepetrocount	Quantity of oligoclase mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
535	frorthoclasepetrocount	Quantity of orthoclase mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
536	fssanidinepetrocount	Quantity of sanidine mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
537	fufluoritepetrocount	Quantity of fluorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
538	fzfeldspathoidspetrocount	Quantity of feldspathoids mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
539	gdgoldpetrocount	Quantity of gold mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
540	gegoethitepetrocount	Quantity of goethite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
541	gggalenapetrocount	Quantity of galena mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
542	gigibbsitepetrocount	Quantity of gibbsite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
543	glassaggregatesglasscount	Quantity of glass aggregates glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
544	glassaggregatespetroco unt	Quantity of glass aggregates mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
545	glasscoatedfeldsparglass co	Quantity of glass-coated feldspar glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
546	glasscoatedfeldsparpetr oct	Quantity of glass-coated feldspar mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
547	glasscoatedgrainglassco unt	Quantity of glass-coated grains in the glass count from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
548	glasscoatedgrainpetroco unt	Quantity of glass-coated mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
549	glasscoatedhornblendeglass	Quantity of glass-coated hornblende grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
550	glasscoatedhornblendepetro	Quantity of glass-coated hornblende mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
551	glasscoatedopaquepetroct	Quantity of glass-coated opaque mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
552	glasscoatedopaquesglasscou	Quantity of glass-coated opaques glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
553	glasscoatedquartzglasscount	Quantity of glass-coated quartz glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
554	glasscoatedquartzpetrocount	Quantity of glass-coated quartz mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
555	glasscountinterpretation	Determination of the soil taxonomic class based on the mineral content from glass counts.	O	*	Character	Unrestricted
556	glasscountmethod	Method counting 300 grains of a specific PSDA sand or silt fraction using a petrographic microscope and identifying only the glass or glass-coated grains. All other minerals are placed in the category other. Results are expressed as percent of the PSDA fraction.	O	*	<<CodeList>> labmethodcode	Unrestricted
557	glassymaterialsglasscount	Quantity of glassy materials glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
558	glassymaterialspetrocount	Quantity of glassy minerals mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
559	glglaconitepetrocount	Quantity of glauconite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
560	gngarnetpetrocount	Quantity of garnet mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
561	goglaucophanepetrocount	Quantity of glaucophane mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
562	gsglassglasscount	Quantity of glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
563	gsglasspetrocount	Quantity of glass mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
564	gygypsumpetrocount	Quantity of gypsum mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
565	hahalitepetrocount	Quantity of halite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
566	hbhydrobiotitepetrocount	Quantity of hydrobiotite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
567	hehematitepetrocount	Quantity of hematite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
568	hnhornblendepetrocount	Quantity of hornblende mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
569	hydroxyinterlayersmectite	Quantity of hydroxy-interlayer-smectite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
570	hydroxyinterlayervermiculite	Quantity of hydroxy-interlayered-vermiculite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
571	hyhypersthene petrocount	Quantity of hypersthene mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
572	ididdingsite petrocount	Quantity of iddingsite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
573	illite petroct	Quantity of illite (i.e., hydromuscovite) mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
574	ironoxidecoatedquartzpetro	Quantity of iron oxide coated quartz mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
575	ironoxidesgoethitemagnetite	Quantity of iron oxides (goethite, magnetite, hematite, limonite) mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
576	jarositepetrocount	Quantity of jarosite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
577	halloysitepetrocount	Quantity of halloysite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
578	kaolinitepetrocount	Quantity of kaolinite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
579	kykyanitepetrocount	Quantity of kyanite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
580	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
581	lalamprobolitepetrocount	Quantity of lamprobolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
582	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted
583	lcanalcimepetrocount	Quantity of analcime mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
584	lelepidocrocitepetrocount	Quantity of lepidocrocite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
585	lileucitepetrocount	Quantity of leucite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
586	lithiophoritepetrocount	Quantity of lithiophorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
587	lmlimonitepetrocount	Quantity of limonite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
588	llepido melanepetrocount	Quantity of lepidomelane mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
589	lplepidolitepetrocount	Quantity of lepidolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
590	luleucoxenepetrocount	Quantity of leucoxene mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
591	memagnesitepetrocount	Quantity of magnesite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
592	mgmagnetitepetrocount	Quantity of magnetite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
593	mhmaghemitepetrocount	Quantity of maghemite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
594	mimicapetrocount	Quantity of mica mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
595	mlmelilitepetrocount	Quantity of melilite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
596	montmorillonitechlorite petro	Quantity of montmorillonite-chlorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
597	montmorillonitemicapet roct	Quantity of montmorillonite-mica mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
598	montmorillonitevermicul itepe	Quantity of montmorillonite-vermiculite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
599	mrmarcasitepetrocount	Quantity of marcasite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
600	mtmontmorillonitepetrocount	Quantity of montmorillonite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
601	muscovitepetrocount	Quantity of muscovite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
602	mzmonazitepetrocount	Quantity of monazite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
603	nenephelinepetrocount	Quantity of nepheline mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
604	nxnoncrystallinepetrocount	Quantity of noncrystalline mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
605	opopaquespetrocount	Quantity of opaques mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
606	otherglasscount	Quantity of other glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
607	otherresistantmineralspetro	Quantity of other resistant mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
608	otherweatherablemineralspet	Quantity of other weatherable mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
609	ototherpetrocount	Quantity of other mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
610	ovolivinepetrocount	Quantity of olivine mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
611	papalagoniteglasscount	Amount of palagonite identified in microscopic examination of the size fraction. Unit of measure: percentage.	O	*	Integer	Unrestricted
612	papalagonitepetrocount	Quantity of palagonite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
613	pdpiemontitepetrocount	Quantity of piemontite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
614	petrocountmethod	Method counting 300 grains of a specific PSDA sand or silt fraction using a petrographic microscope and identifying and quantifying the grains for each mineral type. Results are expressed in percentage of the fraction.	O	*	<<CodeListe >> labmethodc ode	Unrestricted
615	pgpalygorskitepetrocount	Quantity of palygorskite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
616	phlogopitepetrocount	Quantity of phlogopite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
617	piyritepetrocount	Quantity of pyrite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
618	pjplumbojarositepetrocount	Quantity of plumbojarosite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
619	pkperovskitepetrocount	Quantity of perovskite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
620	plagioclasefeldsparpetrocount	Quantity of plagioclase mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
621	pmpumiceglasscount	Amount of pumice identified in microscopic examination of the size fraction Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
622	pmpumicepetrocount	Quantity of pumice mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
623	pnpollenpetrocount	Quantity of pollen mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
624	poplantopalglasscount	Quantity of plant opal glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
625	poplantopalpetrocount	Quantity of plant opal mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
626	potassiumfeldsparpetrocount	Quantity of potassium feldspar mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
627	prepcode	A character string containing the Soil Survey Laboratory code used to identify the type of sample preparation.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
628	prpyroxenepetrocount	Quantity of pyroxene mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
629	pupyrolusitepetrocount	Quantity of pyrolusite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
630	pypyrophyllitepetrocount	Quantity of pyrophyllite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
631	qzquartzpetrocount	Quantity of quartz mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
632	resistantaggregatespetrocount	Quantity of resistant aggregates mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
633	resistantmineraloidspetroct	Quantity of resistant mineraloids mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
634	resistantmineralspetrocount	Quantity of resistant minerals mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
635	resistantmineraltotals	Sum of the percent of all resistant minerals identified in the medium sand sized fraction using the petrographic microscope.	O	*	Integer	Unrestricted
636	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
637	riebeckiteblueamphibolepetr	Quantity of riebeckite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
638	rorhodochrositepetrocount	Quantity of rhodochrosite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
639	rurutilepetrocount	Quantity of rutile mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
640	scscapolitepetrocount	Quantity of scapolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
641	sesepiolitepetrocount	Quantity of sepiolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
642	sgsphaleritepetrocount	Quantity of sphalerite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
643	siliceousaggregatespetr oct	Quantity of siliceous aggregates mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
644	sisideritepetrocount	Quantity of siderite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
645	lsillimanitepetrocount	Quantity of sillimanite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
646	smsmectitepetrocount	Quantity of smectite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
647	snspinelpetrocount	Quantity of spinel mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
648	sostaurolitepetrocount	Quantity of staurolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
649	spsphenepetrocount	Quantity of sphalerite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
650	srsericitepetrocount	Quantity of sericite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
651	ssspongespiculeglasscount	Quantity of sponge spicule glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
652	ssspongespiculepetrocount	Quantity of sponge-spicule mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
653	ststilbitepetrocount	Quantity of stilbite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
654	susulfurpetrocount	Quantity of sulfur mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
655	szserpentinepetrocount	Quantity of serpentine mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
656	tatalcpetrocount	Quantity of talc mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
657	tdtridymitepetrocount	Quantity of tridymite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
658	tetremolitepetrocount	Quantity of tremolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
659	ththenarditepetrocount	Quantity of thenardite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
660	tmtourmalinepetrocount	Quantity of tourmaline mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
661	totalgrainscounted	Identification and quantification of minerals identified in the microscopic examination of the size fraction	O	*	Integer	Unrestricted
662	tptopazpetrocount	Quantity of topaz mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
663	vermiculitechloritepetroct	Quantity of vermiculite-chlorite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
664	vermiculitehydrobiotitepetro	Quantity of vermiculite-hydrobiotite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
665	vermiculitemicapetrocount	Quantity of vermiculite-mica mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
666	vivianitepetrocount	Quantity of vivianite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
667	vrvermiculitepetrocount	Quantity of vermiculite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
668	weatherableaggregatesglassco	Quantity of weatherable aggregate glass grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
669	weatherableaggregatespetroc	Quantity of weatherable aggregates mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
670	weatherablemineralpetrocount	Quantity of weatherable minerals mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
671	wavellitepetrocount	Quantity of wavellite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
672	zeolitepetrocount	Quantity of zeolite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
673	zoisitepetrocount	Quantity of zoisite mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted
674	zirconpetrocount	Quantity of zircon mineral grains from a total examination of 300 grains in a specific PSDA sand or silt fraction using a petrographic microscope. Unit of measure: percentage.	O	*	Integer	Unrestricted

Data dictionary for labmir

The labmir table stores the spectra absorbance values for samples that have these results. Spectroscopy is the study of the interaction between matter and electromagnetic radiation. It is based on the principle that molecular vibrations and electronic transitions associated with soil constituents absorb light while interacting with radiation.

Table B-11.—Data dictionary for the labmir table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
675	absorbance	Analysis of specific absorption features also reveals details about the molecular structure of the sample, for example organic matter quality.	O	*	Character	Unrestricted
676	d wavelengtharrayid	An integer number that uniquely identifies the wavelength collection from the labmirwavelength table.	O	*	Integer	Unrestricted
677	filename	The unique filename of the results file.	O	*	Character	Unrestricted
678	id	The unique record identifier.	O	*	Integer	Unrestricted
679	labprojname	A character string containing the name the project submitter has given to the project. This is to allow the project submitter to identify the project with a name not constrained by LIMS.	O	*	Character	Unrestricted
680	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
681	layerkey	An integer number that uniquely identifies a particular layer	O	*	Integer	Unrestricted

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
682	repnum	An integer number of the replicate number identifies the number of times the sample was analyzed.	O	*	Integer	Unrestricted
683	smp_id	An integer number that uniquely identifies a particular sample, which is used internally by LIMS.	O	*	Integer	Unrestricted

Data dictionary for labmirwavelength

The labmirwavelength table is a lookup table that stores the wavelength increment string that corresponds to the absorbance values.

Table B-12.—Data dictionary for the labmirwavelength table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
684	description	A description of the wavelength collection.	O	*	Character	Unrestricted
685	davelengtharrayid	An integer number that uniquely identifies the wavelength collection from the lab mir wavelength domain.	O	*	Integer	Unrestricted
686	wavelength	A float number of the wavelength in nanometers used to measure the analyte. The wavelength is important for some kinds of analytical techniques where inter-elemental correction is dependent upon the wavelength used to measure the analyte.	O	*	Character	Unrestricted

Data dictionary for labpedon

The labpedon table stores general information about the pedon. The pedon is associated with a site.

Table B-13.—Data dictionary for the labpedon table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
687	cntrldepthtobot	Depth to the bottom of the taxonomic particle-size control section. (Soil Taxonomy)	O	*	Integer	Unrestricted
688	cntrldepthtotop	Depth to the top of the taxonomic particle-size control section. (Soil Taxonomy)	O	*	Integer	Unrestricted
689	fldsyb	The symbol used to uniquely identify the field symbol. The value is generated by NASIS and is based on the muuid from the Mapunit table, expressed in base 36. It is a combination of numeric and lowercase alphabetic characters.	O	*	Character	Unrestricted
690	mapsyb	The symbol used to uniquely identify the soil map unit nationally. The value is generated by NASIS and is based on the muuid from the Mapunit table, expressed in base 36. It is a combination of numeric and lowercase alphabetic characters.	O	*	Character	Unrestricted
691	observationdate	The date on which this particular soil was described or sampled, expressed as month, day, year (i.e., mm/dd/yyyy).	O	*	Integer	Unrestricted
692	pedlabsampnum	An identifier for the pedon sample that is assigned by the KSSL. This identifier is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
693	pedonkey	An integer number that uniquely identifies a particular pedon.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
694	pedonseqnum	The consecutive number of the pedon sampled in a particular survey area in a particular year.	O	*	Integer	Unrestricted
695	sitekey	An integer number that uniquely identifies a particular site.	O	*	Integer	Unrestricted
696	userpedonid	A short label to help a user identify a particular pedon.	O	*	Character	Unrestricted

Data dictionary for labphysicalproperties

The labphysicalproperties table contains the results of analysis of physical properties of the soil measured by the KSSL and cooperating university laboratories.

Table B-14.—Data dictionary for the labphysicalproperties table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
697	aggregatestability052metho	Method for aggregate stability is the weight percent of 0.5 to 2-mm aggregates remaining after wet sieving.	O	*	Character	Unrestricted
698	aggregatestability052mm	Aggregate stability is the weight percent of 0.5 to 2-mm aggregates remaining after wet sieving. Unit of measure: percentage.	O	*	Numeric	Unrestricted
699	airdryovendryratio	The ratio of air-dry gravimetric percent water over ovendry (105 degrees Celsius) gravimetric percent water. If gypsum is present, this ratio is corrected for crystal water in the gypsum. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
700	atterbergliquidlimit	Atterberg liquid limit is the gravimetric percent water content of the soil at a defined boundary between the liquid and plastic states. It is determined by ASTM method D 4318 and reported as percent water on a less than 0.4-mm base. Values less than 14 cannot be measured and are assigned a 0 in the database. The zero indicates a non-plastic soil. Unit of measure: percentage.	O	*	Character	Unrestricted
701	atterbergliquidlimitmethod	Atterberg liquid limit is the gravimetric percent water content of the soil at a defined boundary between the liquid and plastic states. It is determined by ASTM method D 4318 and reported as percent water on a less than 0.4-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted
702	atterbergplasticityindex	Atterberg plasticity index is the calculation of the liquid limit minus the plastic limit. It is defined by the ASTM D 4318 test. Unit of measure: percentage.	O	*	Character	Unrestricted
703	bdbeforerewetorganicmethod	Serves as a reference in measurement of re-wet water retention in organic soils.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
704	bdthirdbarbeforerewetorgan	Bulk density, 1/3-bar rewet (organic soils) is the weight per unit volume of the less than 2-mm fraction, with volume being measured after samples have been equilibrated at 1/3-bar water tension, air dried, and re-equilibrated at 1/3-bar tension. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
705	bdthirdbarlt2reconstituted	Bulk density, less than 2-mm fraction, reconstituted, 1/3 bar is the weight per unit volume of the less than 2-mm fraction, with volume measured on reconstituted samples at 1/3-bar water tension. It is reported as grams per cubic centimeter on a less than 2-mm base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
706	bdthirdbarreconstitutmethod	Bulk density, reconstituted, less than 2-mm air-dry fraction formed into a clod by wetting and desiccation cycles. Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted
707	bdthirdbarrewetorganicsoil	Bulk density, 1/3-bar rewet (organic soils) is the weight per unit volume of the less than 2-mm fraction, with volume being measured after samples have been equilibrated at 1/3-bar water tension, air dried, and re-equilibrated at 1/3-bar tension. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
708	bdthirdrewetorganicmethod	Bulk density, rewet, organic natural fabric clod, with volume being measured after equilibration at 33 kilopascal. Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted
709	bulkdenovendryreconstituted	Bulk density, less than 2-mm fraction, reconstituted, ovendry is the weight per unit volume of the less than 2-mm fraction, with volume measured on ovendry (105 degrees Celsius) reconstituted samples. It is reported as grams per cubic centimeter on a less than 2-mm base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
710	bulkdenrewetovendry	Bulk density, ovendry (105 degrees Celsius) is the weight per unit volume of the less than 2-mm fraction, with volume measured on ovendry (105 degrees Celsius) natural fabric (clods). It is reported as grams per cubic centimeter on a less than 2-mm base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
711	bulkdenrewetovendrymethod	Bulk density, rewet, organic natural fabric clod, with volume being measured at ovendry (110 degrees Celsius). Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
712	bulkdensityairdrymethod	Bulk density, less than 2-mm fraction, air-dry is the weight per unit volume of the less than 2-mm fraction, with volume measured after air drying. It is reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted
713	bulkdensityfieldmoist	Bulk density, field moist, ovendry (110 degrees Celsius) is the weight per unit volume, with volume measured on ovendry (110 degrees Celsius) natural fabric (clods). Reported as grams per cubic centimeter on a less than 2-mm base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
714	bulkdensityfieldmoistmethd	Bulk density, field moist, ovendry (110 degrees Celsius) is the weight per unit volume, with volume measured on ovendry (110 degrees Celsius) natural fabric (clods). Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	Character	Unrestricted
715	bulkdensitylt2mmairdry	Bulk density, less than 2-mm fraction, air-dry is the weight per unit volume of the less than 2-mm fraction, with volume measured after air drying. It is reported as grams per cubic centimeter on a less than 2-mm base. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
716	bulkdensityovendry	The ovendry weight of the less than 2-mm soil material per unit volume of soil exclusive of the desiccation cracks, measured on a coated clod. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
717	bulkdensityovendrymethod	Bulk density, natural fabric clod, with volume being measured after ovendry (110 degrees Celsius). Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted
718	bulkdensitytenthbar	The oven dried weight of the less than 2-mm soil material per unit volume of soil at a water tension of 1/10 bar. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
719	bulkdensitytenthbarmethod	The ovendry weight of the less than 2-mm soil material per unit volume of soil at a water tension of 1/10 bar.	O	*	<<CodeListe>> labmethodcode	Unrestricted
720	bulkdensitythirdbar	The ovendry weight of the less than 2-mm soil material per unit volume of soil at a water tension of one third bar. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
721	bulkdensitythirdbarmethod	Bulk density, 33 kilopascal, natural fabric clod, with volume being measured after equilibration at 33 kilopascal water retention. Reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
722	bulkdeodreconstitutedmethod	Bulk density, less than 2-mm fraction, reconstituted, oven dry is the weight per unit volume of the less than 2-mm fraction, with volume measured on oven dry (105 degrees Celsius) reconstituted samples. It is reported as grams per cubic centimeter on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
723	cec7clayratio	This is the ratio of cation exchange capacity by ammonium acetate at pH 7 to clay content. It provides an index to clay activity and allows inferences about clay mineralogy, the contribution of clay to the exchange capacity, and solution chemistry to be made.	O	*	Numeric	Unrestricted
724	claycaco3	Carbonate clay is the part of less than 0.002-mm diameter particles that are composed of carbonates. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
725	clayco3h2odispersible	Water dispersible carbonate clay, less than 2-mm (by pipette) is the gravimetric percent of less than 0.002 mm particle diameter carbonates dispersed without chemical dispersants, organic matter and clay removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
726	clayfine	Fine clay is the less than 0.0002-mm particle diameter soil separate. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
727	clayfineh2odispersible	Water dispersible fine clay, less than 2 mm (by pipette) is the gravimetric percent of less than 0.0002-mm diameter particles dispersed without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
728	claytotal	Total clay is the soil separate with less than 0.002-mm particle diameter. Clay size carbonate is included. Total clay is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
729	claytotalethanoldispersible	Ethanol and ultrasonic probe dispersible clay, less than 2 mm (by pipette) is the gravimetric percent of less than 0.002-mm particles dispersed without organic matter and salt removal, and without chemical dispersion. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
730	claytoth2odispersible	Water dispersible clay, less than 2 mm (by pipette) is the gravimetric percent of less than 0.002-mm particles dispersed without organic matter and salt removal, and without chemical dispersion. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
731	colewholesoil	Coefficient of linear extensibility as determined by Soil Survey Investigations Report Number 51 Section 3.5.4 is an expression of the volume change between the water content of the clod at 1/3 or 1/10-bar tension (33 kilopascal or 10 kilopascal tension) and oven dryness. Unit of measure: centimeters per centimeter.	O	*	Numeric	Unrestricted
732	colewholesoilmethod	Coefficient of linear extensibility, derived value, natural fabric clod, fractional dimensional change in clod between moist state and dry state. It is reported on a whole soil basis as centimeters per centimeter.	O	*	Character	Unrestricted
733	colorpyrophosphateextract	The Munsell color of the pyrophosphate extract of organic material provides information on the nature of the material. Light colors are associated with fibric materials, and darker colors are associated with sapric materials.	O	*	Character	Unrestricted
734	colorpyrophosphatemethod	To estimate fiber content of organic soil material.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
735	decompositionstate	Decomposition state based on soil color and percent of fiber rubbed.	O	*	Character	Unrestricted
736	effectivecctoclayratio	The effective cation-exchange capacity to total clay ratio. It is reported on a less than 2-mm base. Unit of measure: centimoles of charge per kilogram.	O	*	Numeric	Unrestricted
737	estimatedomplusmineral	Estimated organic matter (based on total carbon) plus mineral content. Unit of measure: percentage.	O	*	Numeric	Unrestricted
738	estimatedorganicmatter	Estimated organic matter based on total carbon. Unit of measure: percentage.	O	*	Numeric	Unrestricted
739	fiberanalysismethod	Rubbed fiber is an approximate measure of the fibric portion of the organic matter in a sample. It is reported as a volume percent of the sample.	O	*	<<CodeListe>> labmethodcode	Unrestricted
740	fiberrubbed	Rubbed fiber is an approximate measure of the fibric portion of the organic matter in a sample. It is reported as a volume percent of the sample. Unit of measure: percentage.	O	*	Numeric	Unrestricted
741	fiberunrubbed	Unrubbed fiber is an approximate measure of the fibric and hemic portions of the organic matter in a sample. It is reported as a volume percent of the sample. Unit of measure: percentage.	O	*	Numeric	Unrestricted
742	frag2075mmwtpctlt75	The gravimetric percentage of 20 to 75-mm diameter particles reported in the less than 75-mm size fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
743	frag220mmwtpctlt75	The gravimetric percentage of 2 to 20-mm diameter particles is reported on a less than 75-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
744	frag25mmwtpctlt75	e gravimetric percentage of 2 to 5-mm diameter particles in the less than 75-mm size fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
745	frag520mmwtpctlt75	The gravimetric percentage of 5 to 20-mm diameter particles reported in the less than 75-mm size fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
746	h2odispersiblefractionmetod	To assess aggregate stability of soil.	O	*	Character	Unrestricted
747	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
748	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted
749	lefieldmoisttoovendry	Linear extensibility percent, field moist to ovendry is the percent change in a clod dimension as water content changes from ovendry to field moist water tension. It is reported as percent length change on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
750	lefmtoodmethod	To assess the shrink swell potential of a soil based on moisture content.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
751	lethirdfifteenlt2method	Linear extensibility percent, derived value, thickness of soil layer in cm multiplied by coefficient of linear extensibility value.	O	*	<<CodeListe>> labmethodcode	Unrestricted
752	lethirdfifteenlt2mm	Linear extensibility percent, less than 2-mm, 1/3 bar to 15 bar is the percent change in a clod dimension as water content changes from 15-bar to 1/3-bar water tension. It is reported as percent length change on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
753	lethirdovendrylt2mm	Linear extensibility percent, 1/3 bar to ovendry, less than 2 mm, is the percent dimensional change of a clod as water content changes from ovendry to 1/3-bar water tension. It is reported as percent length change on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
754	lethirdovendrylt2mmmetho	To assess the shrink swell potential of a soil based on moisture content.	O	*	Character	Unrestricted
755	letoclaythirdbartooovendr	The linear extensibility percent to total clay ratio. It is an indicator of clay mineralogy. It is reported, without units, on a less than 2-mm base.	O	*	Numeric	Unrestricted
756	limnicmaterialtype	Limnic material type based on soil color and percent fiber rubbed.	O	*	Character	Unrestricted
757	mineralcontentloimethod	To estimate mineral content and organic matter content of soils.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
758	mineralcontentlossonigniti	Mineral content, loss on ignition (400 degrees Celsius). The mineral content of the less than 2-mm fraction is the gravimetric percent of plant ash and mineral particles that remain after ignition. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
759	particledensitygt2mm	Particle density greater than 2 mm is the density of the greater than 2-mm diameter particles. It is reported as grams per cubic centimeter of particles. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
760	particledensitygt2mmmmethod	Particle density greater than 2 mm is the density of the greater than 2-mm diameter particles. It is reported as grams per cubic centimeter of particles.	O	*	<<CodeListe>> labmethodcode	Unrestricted
761	particledensitylessthan2mm	Mass per unit of volume (not including pore space) of the solid soil particle either mineral or organic. Also known as specific gravity. Unit of measure: grams per cubic centimeter.	O	*	Numeric	Unrestricted
762	particledensitylt2mmmmethod	Particle density greater than 2 mm is the density of the greater than 2-mm diameter particles. It is reported as grams per cubic centimeter of particles.	O	*	<<CodeListe>> labmethodcode	Unrestricted
763	particlesizemethod	Determination of the sand, silt, and clay fractions within a soil sample.	O	*	<<CodeListe>> labmethodcode	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
764	plasticlimit	The measured water content of the soil, expressed on a dry weight basis, at the change between the semisolid and plastic states. Unit of measure: percentage.	O	*	Character	Unrestricted
765	plasticlimitmethod	Atterberg plastic limit is the water content of a soil at the boundary between the plastic and brittle states. It is defined by the ASTM D 4318 test.	O	*	<<CodeListe>> labmethodcode	Unrestricted
766	prepcode	A character string containing the SSL code used to identify the type of sample preparation.	O	*	Character	Unrestricted
767	psdaethanoldispersionmethod	To assess texture of soils high in gypsum.	O	*	<<CodeListe>> labmethodcode	Unrestricted
768	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
769	sandcoarse	Coarse sand is the soil separate with 0.5 to 1.0-mm particle diameter. It is reported a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
770	sandcoarseethanoldispersibl	Ethanol and ultrasonic probe dispersible coarse sand, less than 2 mm (by pipette) is the gravimetric percent 1.0 to 2.0-mm diameter particles separated without chemical dispersants or the removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
771	sandcoarseh2odispersible	Water dispersible coarse sand, less than 2 mm (by pipette) is the gravimetric percent 1.0 to 2.0-mm diameter particles of a moist sample separated without chemical dispersants or the removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
772	sandfine	Fine sand is the soil separate with 0.10 to 0.25-mm diameter particles. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
773	sandfineethanoldispersible	Ethanol and ultrasonic probe dispersible fine sand, less than 2 mm (by pipette) is the gravimetric percent of 0.10 to 0.25-mm diameter particles separated without the use of chemical dispersants or removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
774	sandfineh2odispersible	Water dispersible fine sand, less than 2 mm (by pipette) is the gravimetric percent of 0.10 to 0.25-mm diameter particles separated without the use of chemical dispersants or removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
775	sandmedium	Medium sand is the soil separate with 0.25 to 0.50-mm particle diameter. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
776	sandmediumethanoldispersibl	Ethanol and ultrasonic probe dispersible medium sand, less than 2 mm (by pipette) is the gravimetric percent 0.25 to 0.50-mm diameter particles separated without chemical dispersants or removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
777	sandmediumh2odispersible	Water dispersible medium sand, less than 2 mm (by pipette) is the gravimetric percent 0.25 to 0.50-mm diameter particles of a moist sample separated without chemical dispersants or removal of organic matter and salts. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
778	sandtotal	Mineral particles 0.05 to 2.0 mm in equivalent diameter as a weight percentage of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
779	sandtotalethanoldispersible	Ethanol and ultrasonic probe dispersible sand, less than 2 mm (by pipette) is the gravimetric percent 0.05 to 2.0-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
780	sandtotalh2odispersible	Water dispersible sand, less than 2 mm (by pipette) is the gravimetric percent 0.05 to 2.0-mm diameter particles of a moist sample separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
781	sandvch2odispersible	Water dispersible very coarse sand, less than 2 mm (by pipette) is the gravimetric percent 1.0 to 2.0-mm diameter particles of a moist sample separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
782	sandverycoarse	Very coarse sand is the soil separate with 1.0 to 2.0-mm particle diameter. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
783	sandverycoarseethanoldisp	Ethanol and ultrasonic probe dispersible very coarse sand, less than 2 mm (by pipette) is the gravimetric percent 1.0 to 2.0-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
784	sandveryfine	Very fine sand is the soil separate with 0.05 to 0.10-mm particle diameter. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
785	sandveryfineethanoldispers	Ethanol and ultrasonic probe dispersible very fine sand, less than 2 mm (by pipette) is the gravimetric percent 0.05 to 0.10-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
786	sandvfh2odispersible	Water dispersible very fine sand, less than 2 mm (by pipette) is the gravimetric percent 0.05 to 0.10-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
787	siltcoarse	Coarse silt is the soil separate with 0.02 to 0.05-mm particle size. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
788	siltcoarseh2odispersible	Water dispersible coarse silt, less than 2 mm (by pipette) is the gravimetric percent of 0.02 to 0.05-mm diameter particles of a moist sample separated without chemical dispersion, or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
789	siltfine	Fine silt is the soil separate with 0.002 to 0.02-mm particle diameter. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted
790	siltfineh2odispersible	Water and ultrasonic probe dispersible fine silt, less than 2 mm (by pipette) is the gravimetric percent 0.002 to 0.02-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
791	silttotal	Total silt is the soil separate with 0.002 to 0.05-mm particle size. It is reported as a gravimetric percent of the less than 2-mm fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
792	silttotalethanoldispersible	Ethanol and ultrasonic probe dispersible silt, less than 2 mm (by pipette) is the gravimetric percent 0.002 to 0.05-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
793	silttotalh2odispersible	Water dispersible silt, less than 2 mm (by pipette) is the gravimetric percent 0.002 to 0.05-mm diameter particles separated without chemical dispersants or organic matter and salt removal. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
794	texturelab	An expression, based on the USDA system of particle sizes, for the relative portions of the various size groups of individual mineral grains less than 2-mm equivalent diameter in a mass of soil as determined using laboratory determined percentages of soil separates.	O	*	Character	Unrestricted
795	totalfragwtpctgt2mmws	The best estimate of the total horizon fragment weight, in percent, on a whole soil basis. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
796	water15bartoclayratio	The ratio of 15-bar water percent to clay percent, reported as grams per gram, on a less than 2-mm base. It provides inferences about clay mineralogy and the effectiveness of dispersion in the particle-size analysis.	O	*	Numeric	Unrestricted
797	waterretention0barmethod	Method used to assess water holding capacity of an approximately saturated soil.	O	*	<<CodeListe>> labmethodcode	Unrestricted
798	waterretention0barsieve	The volumetric content of soil water retained at a tension of 0 bar (0 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted
799	waterretention10thbar	The volumetric content of soil water retained at a tension of 1/10 bar (10 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted
800	waterretention10thbarmeth	Water retention, 10 kilopascal, less than 2-mm air-dry fraction, Water density, gravimetric change in water content between 10 kilopascal and oven-dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	Character	Unrestricted
801	waterretention15bar	The volumetric content of soil water retained at a tension of 15 bars (1500 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
802	waterretention15barmethod	Water retention, 1500 kilopascal, less than 2-mm air-dry fraction, Water density, gravimetric change in water content between 1500 kilopascal and oven-dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
803	waterretention1bar	The volumetric content of soil water retained at a tension of 1 bar (100 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted
804	waterretention1barmethod	Water retention, 100 kilopascal, less than 2-mm air-dry fraction, water density, gravimetric change in water content between 100 kilopascal and oven-dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
805	waterretention2bar	The volumetric content of soil water retained at a tension of 2 bars (200 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted
806	waterretention2barmethod	Water retention, 200 kilopascal, less than 2-mm air-dry fraction, water density, gravimetric change in water content between 200 kilopascal and oven-dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
807	waterretention3barmethod	Water content determined at 3-bar tension.	O	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
808	waterretention3barsieve	Three-bar water, less than 2-mm fraction is the gravimetric percent water held by less than 2-mm samples equilibrated at 3-bar water tension. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
809	waterretention5barmethod	Water retention, 500 kilopascal, less than 2-mm air-dry fraction, water density, gravimetric change in water content between 500 kilopascal and oven dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
810	waterretention5barsieve	Five-bar water, less than 2-mm fraction is the gravimetric percent water held by less than 2-mm samples equilibrated at 5-bar water tension. It is reported on a less than 2-mm base. Unit of measure: percentage.	O	*	Numeric	Unrestricted
811	waterretention6hundmethod	Water retention, 6 kilopascal, less than 2-mm air-dry fraction, water density, gravimetric change in water content between 6 kilopascal and oven dry (110 degrees Celsius). Reported as percent on a less than 2-mm base.	O	*	<<CodeList>> labmethodcode	Unrestricted
812	waterretention6hundredths	The volumetric content of soil water retained at a tension of 0.06 bar (6 kilopascal), expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
813	waterretentionfieldstate	The volumetric content of soil water retained at field state moisture content, expressed as a percentage of the whole soil. Unit of measure: percentage.	O	*	Numeric	Unrestricted
814	waterretentionfieldstateme	Water retention, field state, whole soil fraction, water density, gravimetric change in water content between field state moisture and oven dry (110 degrees Celsius). Reported as percent on whole soil base.	O	*	<<CodeList>> labmethodcode	Unrestricted
815	waterretention3rdbar	The volumetric content of soil water retained at a tension of 1/3 bar (33 kilopascal), expressed as a percentage of the whole soil.	O	*	Numeric	Unrestricted
816	waterretention3rdbarmethod	One-third bar water, less than 2-mm fraction is the gravimetric percent water held by less than 2-mm samples equilibrated at 1/3-bar water tension. It is reported on a less than 2-mm base	O	*	Character	Unrestricted
817	wt pct 1 tenth to 75mm	The gravimetric percentage of 0.1 to 75-mm diameter particles reported in the less than 75-mm size fraction. Unit of measure: percentage.	O	*	Numeric	Unrestricted

Data dictionary for labpreparation

The labpreparation table contains information about the type of preparation, size of the original and final fractions prepared, default container type, and preparation sort order.

Table B-15.—Data dictionary for the labpreparation table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
818	finalsizefrac	Character to indicate the particle-size fraction remaining after a specified preparation.	O	*	Character	Unrestricted
819	moistprepstate	Indicates the moisture content of a soil.	O	*	Character	Unrestricted
820	origsizefrac	Character to indicate the particle size fraction present before a specified preparation.	O	*	Character	Unrestricted
821	prepabbrev	The abbreviated form of a preparation.	O	*	Character	Unrestricted
822	prepcode	A character string containing the SSL code used to identify the type of sample preparation.	O	*	Character	Unrestricted
823	prepdsc	Used to describe how a sample was processed by a specified preparation method.	O	*	Character	Unrestricted
824	prepkey	An integer number that uniquely identifies a particular preparation.	O	*	Integer	Unrestricted
825	preprptsortorder	Used to define the preparations needed based on analyses requested.	O	*	Integer	Unrestricted

Data dictionary for labsite

The labsite table stores information about the site location and where the samples or pedon originated.

Table B-16.—Data dictionary for the labsite table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
826	horizdatnm	The identification given to the reference system used for defining the coordinates of points.	O	*	<<CodeListe> > MetadataDo mainDetail	Unrestricted
827	latdir	Latitude position north or south of the equator. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	<<CodeListe> > MetadataDo mainDetail	Unrestricted
828	latitudedegrees	Latitude in degrees. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	Integer	Unrestricted
829	latitudeminutes	Latitude in minutes. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	Integer	Unrestricted
830	latitudeseconds	Latitude in seconds and decimal seconds. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	Numeric	Unrestricted
831	latitudestddecimaldegrees	Standardized latitude value in decimal degrees, in geographic coordinate system, WGS 84 datum. Values are either auto-populated from GPS or computed from original latitude coordinates using standard conversion algorithms. Unit of measure: degrees (latitude and longitude).	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
832	longdir	Longitude east or west of Greenwich (the Prime Meridian or origin). (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	<<CodeListe> > MetadataDo mainDetail	Unrestricted
833	longitudedegrees	Longitude in degrees. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	Integer	Unrestricted
834	longitudeminutes	Longitude minutes. (Snyder, J.P., 1982, Map Projections Used by the USGS)	O	*	Integer	Unrestricted
835	longitudeseconds	Longitude in seconds and decimal seconds. (Snyder, J.P., 1982, Map Projections Used by USGS)	O	*	Numeric	Unrestricted
836	longitudestddecimaldegrees	Standardized longitude value in decimal degrees, in geographic coordinate system, WGS 84 datum. Values are either auto-populated from GPS or computed from original latitude coordinates using standard conversion algorithms. Unit of measure: degrees (latitude and longitude).	O	*	Numeric	Unrestricted
837	msrepltranversion	Unique identifier.	O	*	Character	Unrestricted
838	sitekey	An integer number that uniquely identifies a particular site.	O	*	Integer	Unrestricted
839	usersiteid	A short label to help a user identify a particular site.	O	*	Character	Unrestricted

Data dictionary for labxrayandthermal

The labxrayandthermal table contains the raw data for each mineral in the sample.

Table B-17.—Data dictionary for the labxrayandthermal table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
840	agantigoritexray	Antigorite determined using portable x-ray fluorescence (pXRF) on a powdered sample; pXRF sample cup with polypropylene film.	O	*	Numeric	Unrestricted
841	alunitedifferentialscanning	Quantitative identification of alunite using differential scanning calorimetry.	O	*	Integer	Unrestricted
842	amphibolexray	Amphiboles determined using portable x-ray fluorescence (pXRF) on a powdered sample; pXRF sample cup with polypropylene film.	O	*	Numeric	Unrestricted
843	analcimexray	Semi-quantitative identification of analcime using x-ray diffraction.	O	*	Numeric	Unrestricted
844	analyzedsizefrac	Size fraction of the soil that was observed under the microscope.	O	*	Character	Unrestricted
845	anatasexray	Semi-quantitative identification of anatase using x-ray diffraction.	O	*	Numeric	Unrestricted
846	antigoritethermogravimetric	The percent antigorite calculated from using the thermogravimetric analysis instrument to heat a dried ground sample, generally the clay fraction, to 900 degrees Celsius, and quantifying the fractional weight loss of the sample between about 600–800 degrees Celsius.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
847	aragonitexray	Semi-quantitative identification of aragonite using x-ray diffraction.	O	*	Numeric	Unrestricted
848	beidellitexray	Semi-quantitative identification of beidellite using x-ray diffraction.	O	*	Numeric	Unrestricted
849	biotitechloritexray	Semi-quantitative identification of biotite chlorite using x-ray diffraction.	O	*	Numeric	Unrestricted
850	biotitexray	Semi-quantitative identification of biotite using x-ray diffraction.	O	*	Numeric	Unrestricted
851	boehmitexray	Semi-quantitative identification of boehmite using x-ray diffraction.	O	*	Numeric	Unrestricted
852	brucitexray	Semi-quantitative identification of brucite using x-ray diffraction.	O	*	Numeric	Unrestricted
853	calcitethermogravimetric	Quantitative identification of calcite using thermogravimetric analysis.	O	*	Integer	Unrestricted
854	calcitexray	Semi-quantitative identification of calcite using x-ray diffraction.	O	*	Numeric	Unrestricted
855	chloritemicaxray	Semi-quantitative identification of chlorite mica using x-ray diffraction.	O	*	Numeric	Unrestricted
856	chloritexray	Semi-quantitative identification of chlorite using x-ray diffraction.	O	*	Numeric	Unrestricted
857	claymineralinterpretation	Interpretation of family mineralogy class based on clay mineralogy determination.	O	*	Character	Unrestricted
858	coarsesiltmineralinterp	Interpretation of family mineralogy class based on coarse silt mineralogy determination.	O	*	Character	Unrestricted
859	cristobalitexray	Semi-quantitative identification of cristobalite using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
860	differentialthermalanalysis	The quartz concentration from thermogravimetric analysis.	O	*	Character	Unrestricted
861	diffscanningcalorimetermeth	Method of quantitatively identifying some soil minerals using changes in specific heat capacity during heating of the sample.	O	*	Character	Unrestricted
862	dolomitexray	Semi-quantitative identification of dolomite using x-ray diffraction.	O	*	Numeric	Unrestricted
863	enstatitexray	Semi-quantitative identification of enstatite using x-ray diffraction.	O	*	Numeric	Unrestricted
864	feldsparxray	Semi-quantitative identification of feldspar using x-ray diffraction.	O	*	Numeric	Unrestricted
865	finesandmineralinterp	Interpretation of family mineralogy class based on fine sand mineralogy determination.	O	*	Character	Unrestricted
866	fluorapatitexray	Semi-quantitative identification of fluorapatite using x-ray diffraction.	O	*	Numeric	Unrestricted
867	goethitethermogravimetric	Quantitative identification of goethite using thermogravimetric analysis.	O	*	Numeric	Unrestricted
868	goethitedifferentialscanning	Quantitative identification of goethite using differential scanning calorimetry.	O	*	Integer	Unrestricted
869	goethitedifferentialthermal	The percent goethite is calculated from the proportional temperature difference between an inert reference material and the sample at about 300–400 degrees Celsius.	O	*	Integer	Unrestricted
870	goethitexray	Semi-quantitative identification of goethite using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
871	gibbisitediffscanningcalori	The percent gibbsite calculated from using the differential scanning calorimetry instrument to heat a dried ground sample, generally the clay fraction, to 700 degrees Celsius, and quantifying the proportional heat of reaction at about 250–350 degrees Celsius.	O	*	Integer	Unrestricted
872	gibbisitethermogravimetric	The percent gibbsite calculated from using the thermogravimetric analysis instrument to heat a dried ground sample, generally the clay fraction, to 900 degrees Celsius, and quantifying the fractional weight loss of the sample at about 250–350 degrees Celsius.	O	*	Integer	Unrestricted
873	gibbsitedifferentialthermal	The percent gibbsite is calculated from the proportional temperature difference between an inert reference material and the sample at about 250–350 degrees Celsius.	O	*	Integer	Unrestricted
874	gibbsitexray	Semi-quantitative identification of gibbsite using x-ray diffraction.	O	*	Numeric	Unrestricted
875	glaucunitexray	Semi-quantitative identification of glauconite using x-ray diffraction.	O	*	Numeric	Unrestricted
876	gypsumdifferentialscanning	Quantitative identification of gypsum using differential scanning calorimetry.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
877	gypsumthermogravimetric	The percent gypsum calculated from using the thermogravimetric analysis instrument to heat a dried ground sample, generally the clay fraction, to 900 degrees Celsius, and quantifying the fractional weight loss of the sample between about 180–220 degrees Celsius.	O	*	Integer	Unrestricted
878	gypsumxray	Semi-quantitative identification of gypsum using x-ray diffraction.	O	*	Numeric	Unrestricted
879	halitexray	Semi-quantitative identification of halite using x-ray diffraction.	O	*	Numeric	Unrestricted
880	halloysitedifferentialscanni	Quantitative identification of halloysite using differential scanning calorimetry.	O	*	Integer	Unrestricted
881	halloysitedifferentialthermal	The percent halloysite is calculated from the proportional temperature difference between an inert reference material and the sample at about 450–550 degrees Celsius.	O	*	Integer	Unrestricted
882	halloysitethermogravimetric	The halloysite concentration of a soil from thermogravimetric analysis.	O	*	Integer	Unrestricted
883	halloysitexray	Semi-quantitative identification of halloysite using x-ray diffraction.	O	*	Numeric	Unrestricted
884	hematitexray	Semi-quantitative identification of hematite using x-ray diffraction.	O	*	Numeric	Unrestricted
885	hornblendexray	Semi-quantitative identification of hornblende using x-ray diffraction.	O	*	Numeric	Unrestricted
886	hydrobiotitexray	Semi-quantitative identification of hydrobiotite using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
887	hydroxyintersmectitexray	Semi-quantitative identification of hydroxy-interlayered smectite using x-ray diffraction.	O	*	Numeric	Unrestricted
888	hydroxyintervermiculitexray	Semi-quantitative identification of hydroxy-interlayered vermiculite using x-ray diffraction.	O	*	Numeric	Unrestricted
889	illitexray	Semi-quantitative identification of illite (i.e., hydromuscovite) using x-ray diffraction.	O	*	Numeric	Unrestricted
890	jarositexray	Semi-quantitative identification of jarosite using x-ray diffraction.	O	*	Numeric	Unrestricted
891	kaolinitedifferentialthermal	The percent kaolinite is calculated from the proportional temperature difference between an inert reference material and the sample at about 450–550 degrees Celsius.	O	*	Integer	Unrestricted
892	kaolinitediffscanningcalori	The percent kaolinite calculated from using the differential scanning calorimetry instrument to heat a dried ground sample, generally the clay fraction, to 700 degrees Celsius, and quantifying the proportional heat of reaction at about 450–550 degrees Celsius.	O	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
893	kaolinitethermogravimetric	The percent kaolinite calculated from using the thermogravimetric analysis instrument to heat a dried ground sample, generally the clay fraction, to 900 degrees Celsius, and quantifying the fractional weight loss of the sample between about 450–550 degrees Celsius.	O	*	Integer	Unrestricted
894	kaolinitexray	Semi-quantitative identification of kaolinite using x-ray diffraction.	O	*	Numeric	Unrestricted
895	labradoritexray	Semi-quantitative identification of labradorite using x-ray diffraction.	O	*	Numeric	Unrestricted
896	labsampnum	A unique identifier number for the pedon assigned by the laboratory. This number is used to link the morphological pedon description with the associated measured property values from the laboratory.	O	*	Character	Unrestricted
897	layerkey	An integer number that uniquely identifies a particular layer.	O	*	Integer	Unrestricted
898	lepidocrocitexray	Semi-quantitative identification of lepidocrocite using x-ray diffraction.	O	*	Numeric	Unrestricted
899	maghemitexray	Semi-quantitative identification of maghemite using x-ray diffraction.	O	*	Numeric	Unrestricted
900	magnetitexray	Semi-quantitative identification of magnetite using x-ray diffraction.	O	*	Numeric	Unrestricted
901	micaxray	Semi-quantitative identification of mica using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
902	montmorillonitechloritexray	Semi-quantitative identification of montmorillonite chlorite using x-ray diffraction.	O	*	Numeric	Unrestricted
903	montmorillonitemicaxray	Semi-quantitative identification of montmorillonite mica using x-ray diffraction.	O	*	Numeric	Unrestricted
904	montmorillonitethermalgravim	Quantitative identification of montmorillonite using thermogravimetric analysis.	O	*	Integer	Unrestricted
905	montmorillonitevermxray	Semi-quantitative identification of montmorillonite mica using x-ray diffraction.	O	*	Numeric	Unrestricted
906	montmorillonitexray	Semi-quantitative identification of montmorillonite using x-ray diffraction.	O	*	Numeric	Unrestricted
907	muscovitexray	Semi-quantitative identification of muscovite using x-ray diffraction.	O	*	Numeric	Unrestricted
908	natrojarositexray	Semi-quantitative identification of natrojarosite using x-ray diffraction.	O	*	Numeric	Unrestricted
909	natronxray	Semi-quantitative identification of natron using x-ray diffraction.	O	*	Numeric	Unrestricted
910	noncrystallinexray	Semi-quantitative identification of noncrystalline minerals using x-ray diffraction.	O	*	Numeric	Unrestricted
911	oligoclasexray	Semi-quantitative identification of oligoclase using x-ray diffraction.	O	*	Numeric	Unrestricted
912	orthoclasexray	Semi-quantitative identification of orthoclase using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
913	palygorskite thermal gravimetry	Semi-quantitative identification of palygorskite using x-ray diffraction.	O	*	Integer	Unrestricted
914	palygorskite xray	Semi-quantitative identification of palygorskite using x-ray diffraction.	O	*	Numeric	Unrestricted
915	phlogopite xray	Semi-quantitative identification of phlogopite using x-ray diffraction.	O	*	Numeric	Unrestricted
916	plagioclase feldspar xray	Semi-quantitative identification of plagioclase using x-ray diffraction.	O	*	Numeric	Unrestricted
917	potassium feldspar xray	Semi-quantitative identification of potassium feldspar using x-ray diffraction.	O	*	Numeric	Unrestricted
918	precode	A character string containing the SSL code used to identify the type of sample preparation.	O	*	Character	Unrestricted
919	pt paragonite xray	Semi-quantitative identification of paragonite using x-ray diffraction.	O	*	Numeric	Unrestricted
920	pyrophyllite xray	Semi-quantitative identification of pyrophyllite using x-ray diffraction.	O	*	Numeric	Unrestricted
921	quartz differential scanning	Quantitative identification of quartz using differential scanning calorimetry.	O	*	Integer	Unrestricted
922	quartz differential thermal	Method of quantitatively identifying some soil minerals using changes in weight during heating of the sample.	O	*	Integer	Unrestricted
923	quartz xray	Semi-quantitative identification of quartz using x-ray diffraction.	O	*	Numeric	Unrestricted
924	resistant minerals xray	Semi-quantitative identification of resistant minerals using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
925	resultsourcekey	Foreign key to the pedon or layer table depending on the result type.	O	*	Integer	Unrestricted
926	sepiolitexray	Semi-quantitative identification of sepiolite using x-ray diffraction.	O	*	Numeric	Unrestricted
927	serpentinexray	Semi-quantitative identification of serpentine using x-ray diffraction.	O	*	Numeric	Unrestricted
928	smectitedifferentialscanning	Quantitative identification of smectite using differential scanning calorimetry.	O	*	Integer	Unrestricted
929	talcxray	Semi-quantitative identification of talc using x-ray diffraction.	O	*	Numeric	Unrestricted
930	thenarditexray	Semi-quantitative identification of thenardite using x-ray diffraction.	O	*	Numeric	Unrestricted
931	thermogravimetricmethod	Method of quantitatively identifying some soil minerals using changes in weight during heating of the sample.	O	*	<<CodeList>> labmethodcode	Unrestricted
932	tridymitexray	Semi-quantitative identification of tridymite using x-ray diffraction.	O	*	Numeric	Unrestricted
933	vermiculitechloritexray	Semi-quantitative identification of vermiculite chlorite using x-ray diffraction.	O	*	Numeric	Unrestricted
934	vermiculitedifferentialscann	Quantitative identification of vermiculite using differential scanning calorimetry.	O	*	Integer	Unrestricted
935	vermiculitehydrobiotitexray	Semi-quantitative identification of vermiculite hydrobiotite using x-ray diffraction.	O	*	Numeric	Unrestricted
936	vermiculitemicaxray	Semi-quantitative identification of vermiculite mica using x-ray diffraction.	O	*	Numeric	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
937	vermiculitexray	Vermiculite as determined using portable x-ray fluorescence (pXRF) on a powdered sample; pXRF sample cup with polypropylene film.	O	*	Numeric	Unrestricted
938	vfsmineralinterp	Interpretation of family mineralogy class based on very fine sand mineralogy determination.	O	*	Character	Unrestricted
939	xraymethod	Method of identifying soil minerals using x-ray diffraction (usually for clayey soils).	O	*	<<CodeListe>> labmethodcode	Unrestricted
940	zeolitexray	Semi-quantitative identification of zeolite using x-ray diffraction.	O	*	Numeric	Unrestricted

Data dictionary for metadatacardinality

This lookup table records the list of allowable cardinality values and names.

Table B-18.—Data dictionary for the MetadataCardinality table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
941	Cardinality	Indicates whether the relationship between the left table and right table is one-to-one or one-to-many. For a one-to-one relationship, a record in the left table is related to zero or one record in the right table. For a one-to-many relationship, a record in the left table is related to zero or more records in the right table. Cardinality does not indicate whether or not the relationship is mandatory.	M	*	<<CodeListe>> Metadata DomainDe tail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
942	CardinalityName	The name of an allowable relationship cardinality.	M	*	<<CodeList>> Metadata DomainDetail	Unrestricted

Data dictionary for metadatacolumnlookup

A record in the MetadataColumnLookup table corresponds to one of the lookups required for an end user to select a value for the corresponding column. Selecting a value for a column may require multiple lookups down a table hierarchy.

Table B-19.—Data dictionary for the MetadataColumnLookup table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
943	Branch	An integer value used to distinguish one branch of a column lookup from another. Both branches must share the same relationship or set of relationships from the foreign key table to that table's drill-down parent table, in the case of a drill-down relationship, or to that table's immediate lookup table in the case of a lookup relationship.	M	*	Integer	Unrestricted
944	ColumnID	An integer value that uniquely identifies a column in a data model, not just within a table.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
945	DisplayColumnID	An integer value that uniquely identifies a column in a data model. In this case, a column that should be displayed in lieu of a foreign key.	M	*	Integer	Unrestricted
946	DisplayColumnLabel	The label that should be displayed for a column in a lookup choice list and when that column is displayed in lieu of a foreign key.	M	*	Character	Unrestricted
947	DisplayOnlyInChoiceList	A Boolean value that indicates whether or not the corresponding column should be displayed in a choice list but not be displayed in lieu of the corresponding foreign key in a table once a selection has been made. This flag can be used to include an obsolete indicator in a choice list but exclude that column from being displayed in the related table itself.	M	*	Integer	Unrestricted
948	DisplaySequence	The left to right sequence in which lookup columns in a related table should be displayed.	M	*	Integer	Unrestricted
949	DisplayTableColumnSequence	Specifies the sequence of a column in a lookup table.	M	*	Integer	Unrestricted
950	DisplayTableID	An integer value that uniquely identifies the lookup table in a lookup relationship.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
951	RelationshipID	An integer value that uniquely identifies a relationship between two tables in a database.	M	*	Integer	Unrestricted
952	TableColumnSequence	Specifies the sequence of a column in a table.	M	*	Integer	Unrestricted
953	TableID	An integer value that uniquely identifies a table.	M	*	Integer	Unrestricted

Data dictionary for metadatadomaindetail

A record in the MetadataDomainDetail table corresponds to a domain. A domain is a fixed set of values to which a column may be restricted. The same domain may serve as the domain for more than one column in a database.

Table B-20.—Data dictionary for the MetadataDomainDetail table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
954	choice_acronym	An abbreviated string for the choice label within a domain.	M	*	Character	Unrestricted
955	ChoiceLabel	One of two strings representing a member of a domain. This corresponds to the instance that is typically longer and is typically in mixed case. This value must be unique for every member of a given domain.	M	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
956	ChoiceName	One of two strings representing a member of a domain. This corresponds to the instance that is typically shorter and is typically in lower case. This value must be unique for every member of a given domain.	M	*	Character	Unrestricted
957	ChoiceObsolete	Indicates if a member of a domain is considered obsolete. Obsolete choices are not displayed in a choice list for new data entry.	M	*	Integer	Unrestricted
958	ChoiceSequence	Specifies the sequence in which the members of a domain should be ordered or displayed.	M	*	Numeric	Unrestricted
959	ChoiceValue	An integer value that uniquely identifies a member of the corresponding domain.	M	*	Numeric	Unrestricted
960	DomainID	An integer value that uniquely identifies a domain.	M	*	Numeric	Unrestricted
961	FieldSize	The maximum allowable number of characters for a column whose logical data type is string.	M	*	Integer	Unrestricted



Data dictionary for metadataindexdetail

A record in the MetadataIndexDetail table corresponds to a column in an index for a table in a relational database.

Table B-21.—Data dictionary for the MetadataIndexDetail table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
962	ColumnID	An integer value that uniquely identifies a column in a data model, not just within a table.	M	*	Integer	Unrestricted
963	IndexColumnSequence	Specifies the sequence of a column in a table index.	M	*	Integer	Unrestricted
964	IndexID	An integer value that uniquely identifies a table index.	M	*	Integer	Unrestricted
965	TableColumnSequence	Specifies the sequence of a column in a table.	M	*	Integer	Unrestricted
966	TableID	An integer value that uniquely identifies a table.	M	*	Integer	Unrestricted

Data dictionary for metadata relationship detail

A record in the MetadataRelationshipDetail table corresponds to one of the column pairs used to join two tables in a relational database. A join between two tables may be based on one or more column pairs.

Table B-22.—Data dictionary for the MetadataRelationshipDetail table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
967	LeftColumnID	An integer value that uniquely identifies a column in a data model. In this case, a column in the left (parent) table in a relationship that is used in whole or part to join the two tables in that relationship.	M	*	Integer	Unrestricted
968	LeftTable_FieldName	The field name of the column used to join the parent table primary key to a child table foreign key.	M	*	Character	Unrestricted
969	LeftTable_TableName	The table name of the parent table in a relationship.	M	*	Character	Unrestricted
970	LeftTableColumnSequence	An integer value that specifies a column's sequence in the left (parent) table in a relationship.	M	*	Integer	Unrestricted
971	LeftTableID	An integer value that uniquely identifies the left (parent) table in a relationship. For a one-to-one mandatory relationship, this corresponds to the table that can exist without the other. In a one-to-many relationship, this corresponds to the table on the one side of the relationship.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
972	RelationshipID	An integer value that uniquely identifies a relationship between two tables in a database.	M	*	Integer	Unrestricted
973	RightColumnID	An integer value that uniquely identifies a column in a data model. In this case, a column in the right (child) table in a relationship that is used in whole or part to join the two tables in the relationship.	M	*	Integer	Unrestricted
974	RightTable_FieldName	The table name of a child table in a relationship.	M	*	Character	Unrestricted
975	RightTable_TableName	The field name of the column in a child table used as a foreign key to join to a parent table.	M	*	Character	Unrestricted
976	RightTableColumnSequence	An integer value that specifies a column's sequence in the right (child) table in a relationship.	M	*	Integer	Unrestricted
977	RightTableID	An integer value that uniquely identifies the right (child) table in a relationship. For a one-to-one mandatory relationship, this corresponds to the table that cannot exist without the other. In a one-to-many relationship, this corresponds to the table on the many side of the relationship.	M	*	Integer	Unrestricted

Data dictionary for metadata`relationshipmaster`

A record in the MetadataRelationshipMaster table corresponds to a relationship between two tables in a relational database. There may be more than one relationship between the same two tables in a relational database.



Table B-23.—Data dictionary for the MetadataRelationshipMaster table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
978	Cardinality	Indicates whether the relationship between the left table and right table is one-to-one or one-to-many. For a one-to-one relationship, a record in the left table is related to zero or one record in the right table. For a one-to-many relationship, a record in the left table is related to zero or more records in the right table. Cardinality does not indicate whether or not the relationship is mandatory.	M	*	<<CodeListe >> MetadataDo mainDetail	Unrestricted
979	CardinalityMaximum	The maximum allowable number of records in a child table for its corresponding parent table or tables, where -1 corresponds to no maximum.	M	*	Integer	Unrestricted
980	CardinalityMinimum	The minimum allowable number of records in a child table for its corresponding parent table or tables, which will always be either zero or one.	M	*	Integer	Unrestricted
981	ConstraintDeferrable	A Boolean value that indicates if the corresponding constraint can be deferred.	M	*	Integer	Unrestricted
982	DeleteFail	A Boolean value that indicates if the delete rule for the corresponding relationship is fail. If the delete rule is not fail, it is assumed to be cascade.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
983	FavoriteChild	A Boolean value that indicates if the right table in a relationship corresponds to the left table's favorite child. When visiting the children of a table, the favorite child is the default table that will be visited when no explicit child table is specified.	M	*	Integer	Unrestricted
984	ForeignKeyConstraintName	The foreign key constraint name associated with the corresponding relationship.	M	*	Character	Unrestricted
985	InHierarchy	When InHierarchy is set, the two tables involved in the corresponding relationship are considered to be part of the same hierarchy. A hierarchy is a graph with a single root node where no branches ever converge. In a data model, a table may be a member of one and only one hierarchy.	M	*	Integer	Unrestricted
986	LeftTableID	An integer value that uniquely identifies the left (parent) table in a relationship. For a one-to-one mandatory relationship, this corresponds to the table that can exist without the other. In a one-to-many relationship, this corresponds to the table on the one side of the relationship.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
987	LoadFindRelated	A Boolean value that indicates whether or not Load Related and Find Related are enabled for the corresponding relationship. This corresponds to what used to be referred to as Traverse in the original NASIS metadata.	M	*	Integer	Unrestricted
988	Mandatory	Indicates if a record exists in the right table of a relationship, a corresponding record must exist in the left table of that relationship (i.e., mandatory equals yes). In other words, when mandatory is no, a record may exist in the right table of a relationship without having a corresponding record in the left table of that relationship.	M	*	Integer	Unrestricted
989	Paste	A Boolean value that indicates if records can be created in the right table of a relationship by copying and pasting records from the left table in that relationship. In other words, new records are pasted into the right table of a relationship, where the only columns populated either correspond to columns that also exist in the left table of that relationship, or columns that have a default value.	M	*	Integer	Unrestricted
990	RelationshipID	An integer value that uniquely identifies a relationship between two tables in a database.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
991	RelationshipName	A name given to a relationship between two tables in a relational database. If there is more than one relationship between the same two tables, the name of each of those relationships must be unique.	M	*	Character	Unrestricted
992	RightTableID	An integer value that uniquely identifies the right (child) table in a relationship. For a one-to-one mandatory relationship, this corresponds to the table that cannot exist without the other. In a one-to-many relationship, this corresponds to the table on the many side of the relationship.	M	*	Integer	Unrestricted

Data dictionary for metadatatable

A record in the MetadataTable table corresponds to a table in a relational database.

Table B-24.—Data dictionary for the MetadataTable table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
993	ClientDatabaseOnly	For the NASIS database, a Boolean value that, when set, indicates that the corresponding table is present only in a NASIS client database.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
994	CreateAsView	A Boolean value that indicates whether or not the corresponding table is really a view. This attribute was created to support a chorizon table that was created as a view. After discarding Microsoft's Merge Replication, which limited the number of columns in a table to less than the number of columns in chorizon, table chorizon was reverted back to a traditional table. This attribute is probably no longer supported by the NASIS code.	M	*	Integer	Unrestricted
995	DAGLevel	A table's level in the in the set of directed acyclic graphs that are defined for the corresponding data model. A root table corresponds to level zero.	M	*	Integer	Unrestricted
996	Editable	A Boolean value that indicates whether or not the contents of the corresponding table can be changed by a user through either the NASIS grid editor or one of the special NASIS editors.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
997	ImportExportFileName	The base part of the file name of a table's associated ASCII pipe delimited import or export file. The complete name of a table's associated import or export file is the base name followed by the characters .txt. For example, if the base name is alpha, the name of the associated import or export file is alpha.txt.	M	*	Character	Unrestricted
998	NoInsertOrDelete	A Boolean value that indicates whether or not end users should be able to insert records into or delete records from the corresponding table.	M	*	Integer	Unrestricted
999	RootTable	A Boolean value that indicates if the corresponding table is the root table of an object hierarchy.	M	*	Integer	Unrestricted
1000	Selectable	A Boolean value that indicates whether or not records from the corresponding table can potentially be created, read, updated, or deleted in NASIS. A table can be selectable but not visible in the NASIS grid editor. Such a table is typically managed by a special editor in NASIS. A table that is not selectable cannot be referenced in a NASIS query.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1001	ServerDatabaseOnly	For the NASIS database, a Boolean value that, when set, indicates that the corresponding table is present only in the central NASIS server database. For the staging server database, a Boolean value that, when set, indicates that the contents of the corresponding table should not be copied from the staging server database to a table with the same name in the Soil Data Warehouse database.	M	*	Integer	Unrestricted
1002	TableCollectionID	An integer value that uniquely identifies a collection of tables. A table can be a member of no more than one collection.	M	*	Integer	Unrestricted
1003	TableDescription	A narrative text description of what a table represents or records.	M	*	Character	Unrestricted
1004	TableID	An integer value that uniquely identifies a table.	M	*	Integer	Unrestricted
1005	TableLabel	A label associated with a table that is typically more connotative than the table's corresponding logical name. Within a database, no two tables may share the same label.	M	*	Character	Unrestricted
1006	TableLogicalName	A name associated with a table that is typically more connotative than the table's corresponding physical name. Within a database, no two tables may share the same logical name.	M	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1007	TablePhysicalName	The name that is used to physically implement a table in a database management system. Within a database, no two tables may share the same physical name.	M	*	Character	Unrestricted
1008	Visible	For a table, a Boolean value that indicates whether or not the corresponding table should be visible in the NASIS grid editor. A table that is not visible in the NASIS grid editor should not be able to be selected as the target table for a NASIS query. For a column, a Boolean value that indicates whether or not the corresponding column should be visible in either the NASIS grid editor or one the special NASIS editors.	M	*	Integer	Unrestricted

Data dictionary for metadatatablecolumn

A record in the MetadataTableColumn table corresponds to a column in a table in a relational database.

Table B-25.—Data dictionary for the MetadataTableColumn table.

Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1009	Alignment	An integer value that indicates if a column should be left, center, or right justified.	M	*	<<CodeList>> MetadataDomain Detail	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1010	BaseColumnPhysicalName	The base physical name of the corresponding column (i.e., the column physical name prior to adding any extensions for HLRV and/or Calc Source columns).	M	*	Character	Unrestricted
1011	ColumnDescription	The narrative text description or definition of a column.	M	*	Character	Unrestricted
1012	ColumnGroupLabel	The group heading for the corresponding column group.	M	*	Character	Unrestricted
1013	ColumnHelpText	Narrative text that provides data entry guidelines for the corresponding column.	M	*	Character	Unrestricted
1014	ColumnID	An integer value that uniquely identifies a column in a data model not just within a table.	M	*	Integer	Unrestricted
1015	ColumnLabel	The column heading for the corresponding column.	M	*	Character	Unrestricted
1016	ColumnLogicalName	The logical name of the corresponding column. Logical names are typically more connotative than physical names. Within a table, no two columns may have the same logical name.	M	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1017	ColumnPhysicalName	The physical name of the corresponding column (i.e., the name by which that column is implemented in the corresponding table). Within a table, no two columns may have the same physical name.	M	*	Character	Unrestricted
1018	DatetimePrecision	An integer value that indicates the smallest time period that should be displayed for a datetime attribute. For any datetime attribute, the assumption is that year will always be displayed. This attribute must be populated for all datetime attributes, even when only the year is displayed.	M	*	<<CodeList>> MetadataDomain Detail	Unrestricted
1019	DecimalPrecision	The number of decimal digits that should be displayed for a column whose logical data type is float.	M	*	Integer	Unrestricted
1020	DefaultType	Indicates the type of default value for the corresponding column, if any.	M	*	<<CodeList>> MetadataDomain Detail	Unrestricted
1021	DefaultValue	The default value for a column whose corresponding default type is literal.	M	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1022	DisplaySize	The default display width of a column in spreadsheet view, in characters.	M	*	Integer	Unrestricted
1023	DomainID	An integer value that uniquely identifies a domain.	M	*	Integer	Unrestricted
1024	FieldSize	The maximum allowable number of characters for a column whose logical data type is string.	M	*	Integer	Unrestricted
1025	FileContentColumnID	The Column ID of the column used to store the contents of a file. This is an attribute of the corresponding column. The logical data type of the corresponding column must be File Reference. A File Reference type column will display a file name in a table editor grid and will also include buttons labeled Open or Save. Open is used to import the contents of a file into the column identified by this attribute. Save is used to copy the imported file contents to a file whose name is stored in the File Reference column.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1026	IncludeInReplicationSelectList	A Boolean value that indicates if the corresponding column should be included in the corresponding table's replication selection list.	M	*	Integer	Unrestricted
1027	LogicalDataType	Indicates the corresponding column's logical data type. Logical data type is independent of the Database Management System that is ultimately used to implement a database.	M	*	<<CodeListe>> MetadataDomain Detail	Unrestricted
1028	FieldSize	The maximum allowable number of characters in a string attribute.	M	*	Integer	Unrestricted
1029	Maximum	The maximum allowable value of a column.	M	*	Numeric	Unrestricted
1030	Minimum	The minimum allowable value of a column.	M	*	Numeric	Unrestricted
1031	NotNull	A Boolean value that indicates if a value is always required for the corresponding column.	M	*	Integer	Unrestricted
1032	PhysicalDataType	Indicates the corresponding column's physical data type.	M	*	<<CodeListe>> MetadataDomain Detail	Unrestricted
1033	Protected	A Boolean value that indicates if the corresponding column should be prevented from being changed by end users.	M	*	Integer	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1034	SetDefaultOnObjectChange	Indicates if the corresponding column should be set to its default value when the corresponding object is updated.	M	*	Integer	Unrestricted
1035	SetDefaultOnRowChange	Indicates if the corresponding column should be set to its default value when the corresponding record is updated.	M	*	Integer	Unrestricted
1036	SortDirection	Indicates if the corresponding column should be sorted in ascending or descending order.	M	*	<<CodeListe>> MetadataDomain Detail	Unrestricted
1037	SortSequence	A column's position in the corresponding table's sort key.	M	*	Integer	Unrestricted
1038	SortType	Indicates how the corresponding column should be sorted (numeric, alphanumeric, or lexigraphic).	M	*	<<CodeListe>> MetadataDomain Detail	Unrestricted
1039	TableColumnSequence	Specifies the sequence of a column in a table.	M	*	Integer	Unrestricted
1040	TableID	An integer value that uniquely identifies a table.	M	*	Integer	Unrestricted
1041	TablePhysicalName	The name that is used to physically implement a table in a database management system. Within a database, no two tables may share the same physical name.	M	*	Character	Unrestricted



Line	Name/Role Name	Definition	Obligation/ Condition	Maximum Occurrence	Data Type	Domain
1042	UnitsOfMeasureAbbreviated	An abbreviation of the units of measure in which a column is recorded.	M	*	Character	Unrestricted
1043	UnitsOfMeasureUnabbreviated	The units of measure in which a column is recorded.	M	*	Character	Unrestricted
1044	Visible	For a table, a Boolean value that indicates whether or not the corresponding table should be visible in the NASIS grid editor. A table that is not visible in the NASIS grid editor should not be able to be selected as the target table for a NASIS query. For a column, a Boolean value that indicates whether or not the corresponding column should be visible in either the NASIS grid editor or one the special NASIS editors.	M	*	Integer	Unrestricted

Annex C: Codelist for framework soil laboratory information

CodeList for labarea

A lookup table containing the list of valid NRCS areas, both current and obsolete, for country, county, soil survey area and MLRA. Note that a soil survey area code is a concatenation of a U.S. state FIPS code and a soil survey area number. Since this table is intended to record only U.S. and U.S. Territory soil survey areas, every soil survey area code in this table should be unique.

Table C-1.—CodeList for the labarea table.

areatype	areasubtype	parentareakey	parentorgkey	areacode	areaname	areaabbrev	areadesc
county		3946		AK013	Aleutians East Borough		
county		3946		AK016	Aleutians West Census Area		
county		3946		AK020	Anchorage Borough		
county		3946		AK050	Bethel Census Area		
county		3946		AK060	Bristol Bay Borough		

CodeList for labmethodcode

The labmethodcode table relates a nonconnotative method code with the preparation, instrument, size fraction, analyte, procedure (if any), and calculation algorithm (if any) represented by that method code.

Table C-2.—CodeList for the labmethodcode table.

procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
1	Aggregate Stability	Aggregate Stability, 2 to 0.5-mm Aggregates Retained	AGGSTAB	SSIR No. 42, version 4, page 163	3F1a1a	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
1	Aggregate Stability	Aggregate Stability, 2 to 0.5-mm Aggregates Retained	AGGSTAB	SSIR No. 42, version 4, page 163	3F1a1a	2	NSSL CMS
1	Aggregate Stability	Aggregate Stability, 2 to 0.5-mm Aggregates Retained	AGGSTAB	SSIR No. 42, version 4, page 163	3F1a1a	1	SSL LIMS Version 1.0
1	Aggregate Stability	Aggregate Stability, 2 to 0.5-mm Aggregates Retained	AGGSTAB	SSIR No. 42, version 4, page 163	3F1a1a	2	NSSL CMS
2	Atterberg Limits	Atterberg Limits, NSMC Lab	ATTERBERG	SSIR No. 42, version 4, page 167	3H	1	SSL LIMS Version 1.0
2	Atterberg Limits	Atterberg Limits, NSMC Lab	ATTERBERG	SSIR No. 42, version 4, page 167	3H	21	Virgina Tech
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	22	The Ohio State University
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	26	University of Minnesota
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	18	Michigan Technologic al University
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	37	University of Massachuset ts
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	1	SSL LIMS Version 1.0
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	33	The Pennsylvania State University
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	9	Texas A&M University
3	Bulk Density, Clod	Bulk Density and Water Retention, Pressure-Plate, Clods	DBH2ORET	SSIR No. 42, version 4, page 104	DbWR1	30	West Virginia University
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	25	University of Kentucky



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	33	The Pennsylvania State University
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	15	Purdue University
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	1	SSL LIMS Version 1.0
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	37	University of Massachuset ts
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	22	The Ohio State University
4	Bulk Density, Soil Core	Bulk Density and Water Retention, Pressure-Plate, Cores	DBH2ORETCO	SSIR No. 42, version 4, page 104	3B6	21	Virgina Tech
5	Bulk Density, Reconstituted	Bulk Density and Water Retention, Reconstituted	DBRECON	SSIR No. 42, version 4, page 99	3B2	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
6	Bulk Density, Compliant Cavity	Bulk Density, Compliant Cavity	DBCOMPCAV	SSIR No. 42, version 4, page 98	3B3	1	SSL LIMS Version 1.0
8	Bulk Density, Clod, Field State	Bulk Density, Field State	DBFLDSTATE	SSIR No. 42, version 4, page 75	3B1a	1	SSL LIMS Version 1.0
8	Bulk Density, Clod, Field State	Bulk Density, Field State	DBFLDSTATE	SSIR No. 42, version 4, page 75	3B1a	2	NSSL CMS
8	Bulk Density, Clod, Field State	Bulk Density, Field State	DBFLDSTATE	SSIR No. 42, version 4, page 75	4A1a	36	North Dakota State University
8	Bulk Density, Clod, Field State	Bulk Density, Field State	DBFLDSTATE	SSIR No. 42, version 4, page 75	4A1a	18	Michigan Technologic al University
9	Bulk Density, Reconstituted, Moist	Bulk Density, Reconstituted, Moist	DBRECON_M	NULL	DbRec1	1	SSL LIMS Version 1.0
10	Bulk Density, Clod, Rewet	Bulk Density, Rewet, Clods	DBREWET	SSIR No. 42, version 4, page 89	3B1d	1	SSL LIMS Version 1.0
10	Bulk Density, Clod, Rewet	Bulk Density, Rewet, Clods	DBREWET	SSIR No. 42, version 4, page 89	3B1d	2	NSSL CMS
11	Sample Preparation	Bulk Sample Preparation	BlkSmpPrep	SSIR No. 42, version 4, page 16	1B	1	SSL LIMS Version 1.0
12	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm	CACO3	SSIR No. 42, version 4, page 269	4E1a1a1a1	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
12	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm	CACO3	SSIR No. 42, version 4, page 269	4E1a1a1a1	2	NSSL CMS
12	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm	CACO3	SSIR No. 42, version 4, page 269	6E1h	18	Michigan Technologic al University
12	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm	CACO3	SSIR No. 42, version 4, page 269	4E1a1a1a1	26	University of Minnesota
12	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm	CACO3	SSIR No. 42, version 4, page 269	4E1a1a1a1	40	Iowa State University
13	Calcium Carbonate Equivalent, 2-20mm	Calcium Carbonate Equivalent, HCl, 2-20mm	CACO3_20	SSIR No. 42, version 4, page 269	4E1a1a1a2	2	NSSL CMS
13	Calcium Carbonate Equivalent, 2-20mm	Calcium Carbonate Equivalent, HCl, 2-20mm	CACO3_20	SSIR No. 42, version 4, page 269	4E1a1a1a2	1	SSL LIMS Version 1.0
14	Carbon, Total	Carbon, Total	TOTC	SSIR No. 42, version 4, page 473	6A2e	1	SSL LIMS Version 1.0
14	Carbon, Total	Carbon, Total	TOTC	SSIR No. 42, version 4, page 473	6A2e	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
15	Acid Oxalate Extract	Cations, Acid Oxalate Extractable	OXAL	SSIR No. 42, version 4, page 312	4G2	1	SSL LIMS Version 1.0
15	Acid Oxalate Extract	Cations, Acid Oxalate Extractable	OXAL	SSIR No. 42, version 4, page 312	4G2	2	NSSL CMS
16	Dithionite- Citrate Extract	Cations, Dithionite- Citrate Extractable	DITH	SSIR No. 42, version 4, page 307	4G1	20	University of California, Davis
16	Dithionite- Citrate Extract	Cations, Dithionite- Citrate Extractable	DITH	SSIR No. 42, version 4, page 307	4G1	1	SSL LIMS Version 1.0
16	Dithionite- Citrate Extract	Cations, Dithionite- Citrate Extractable	DITH	SSIR No. 42, version 4, page 307	4G1	40	Iowa State University
16	Dithionite- Citrate Extract	Cations, Dithionite- Citrate Extractable	DITH	SSIR No. 42, version 4, page 307	4G1	18	Michigan Technologic al University
17	KCl Extract	Cations, Potassium Chloride Extractable	KCL	SSIR No. 42, version 4, page 197	4B3a1a	18	Michigan Technologic al University
17	KCl Extract	Cations, Potassium Chloride Extractable	KCL	SSIR No. 42, version 4, page 197	4B3a1a	1	SSL LIMS Version 1.0
18	Na- Pyrophosphate Extract	Cations, Pyrophosphate Extractable	PYRO	SSIR No. 42, version 4, page 317	4G3	1	SSL LIMS Version 1.0
18	Na- Pyrophosphate Extract	Cations, Pyrophosphate Extractable	PYRO	SSIR No. 42, version 4, page 317	4G3	18	Michigan Technologic al University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
19	CEC and Cations, Neutral Salts	CEC and Cations, NH ₄ Cl	CECCL	SSIR No. 42, version 4, page 181	4B1b1a	1	SSL LIMS Version 1.0
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	1	SSL LIMS Version 1.0
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	20	University of California, Davis
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	24	Kansas State University
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	19	University of Florida
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	33	The Pennsylvania State University
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	17	University of Missouri
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	18	Michigan Technologic al University
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	26	University of Minnesota
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	22	The Ohio State University
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	35	University of Arkansas
20	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc	CECNH4	SSIR No. 42, version 4, page 173	4B1a1	40	Iowa State University
21	Clay Mineralogy, DSC	Differential Scanning Calorimetry, Thermal Analyzer	DSC910S	SSIR No. 42, version 4, page 410	7A3a	2	NSSL CMS
21	Clay Mineralogy, DSC	Differential Scanning Calorimetry, Thermal Analyzer	DSC910S	SSIR No. 42, version 4, page 410	7A3a	1	SSL LIMS Version 1.0
22	Effervescence, 1N HCl	Effervescence, 1N HCl	EFF_1nhcl	SSIR No. 42, version 4, page 25	1B1b2d2	1	SSL LIMS Version 1.0
23	Extractable Acidity, BaCl ₂ -TEA	Extractable Acidity, BaCl ₂ -Triethanolamine, Titration	EXTRACID	SSIR No. 42, version 4, page 191	4B2a1a1	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
23	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine, Titration	EXTRACID	SSIR No. 42, version 4, page 191	4B2a1a1	2	NSSL CMS
23	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine, Titration	EXTRACID	SSIR No. 42, version 4, page 191	4B2a1a1	33	The Pennsylvania State University
23	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine, Titration	EXTRACID	SSIR No. 42, version 4, page 191	4B2a1a1	26	University of Minnesota
23	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine, Titration	EXTRACID	SSIR No. 42, version 4, page 191	6H5b	18	Michigan Technologic al University
24	Gypsum, less than 2mm	Gypsum, H ₂ O Extraction, Acetone Precipitation, less than 2mm	GYP SUM	SSIR No. 42, version 4, page 273	6F1a	36	North Dakota State University
24	Gypsum, less than 2mm	Gypsum, H ₂ O Extraction, Acetone Precipitation, less than 2mm	GYP SUM	SSIR No. 42, version 4, page 273	4E2a1a1a1	9	Texas A&M University
24	Gypsum, less than 2mm	Gypsum, H ₂ O Extraction, Acetone Precipitation, less than 2mm	GYP SUM	SSIR No. 42, version 4, page 273	4E2a1a1a1	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
24	Gypsum, less than 2mm	Gypsum, H2O Extraction, Acetone Precipitation, less than 2mm	GYP SUM	SSIR No. 42, version 4, page 273	4E2a1a1a1	1	SSL LIMS Version 1.0
25	Gypsum, 2- 20mm	Gypsum, H2O Extraction, Acetone Precipitation, 2- 20mm	GYP20	SSIR No. 42, version 4, page 273	4E2a1a1a2	1	SSL LIMS Version 1.0
25	Gypsum, 2- 20mm	Gypsum, H2O Extraction, Acetone Precipitation, 2- 20mm	GYP20	SSIR No. 42, version 4, page 273	4E2a1a1a2	2	NSSL CMS
26	Mineral Content	Mineral Content, Loss on Ignition	MINIGNITE	SSIR No. 42, version 4, page 368	5A	1	SSL LIMS Version 1.0
26	Mineral Content	Mineral Content, Loss on Ignition	MINIGNITE	SSIR No. 42, version 4, page 368	5A	2	NSSL CMS
27	Nitrate, KCl Extractable	Nitrate, 1 M KCl Extractable, FIA	NO3KCL	SSIR No. 42, version 4, page 260	4D9a1a	1	SSL LIMS Version 1.0
28	Nitrogen, Mineralizable	Nitrogen, Mineralizable	MINT	SSIR No. 42, version 4, page 388	6B2a1a1	1	SSL LIMS Version 1.0
29	Nitrogen, Total	Nitrogen, Total	TOTN	SSIR No. 42, version 4, page 475	6B4a	1	SSL LIMS Version 1.0
29	Nitrogen, Total	Nitrogen, Total	TOTN	SSIR No. 42, version 4, page 475	6B4a	2	NSSL CMS
29	Nitrogen, Total	Nitrogen, Total	TOTN	SSIR No. 42, version 4, page 475	6B4a	20	University of California, Davis



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
30	Optical Analysis, Glass Count	Optical Analysis, Glass Count	OPTICAL_G	SSIR No. 42, version 4, page 428	7B1a2	2	NSSL CMS
30	Optical Analysis, Glass Count	Optical Analysis, Glass Count	OPTICAL_G	SSIR No. 42, version 4, page 428	7B1a2	1	SSL LIMS Version 1.0
31	Optical Analysis, Full Count	Optical Analysis, Full Grain Count	OPTICAL_F	SSIR No. 42, version 4, page 428	7B1a2	1	SSL LIMS Version 1.0
31	Optical Analysis, Full Count	Optical Analysis, Full Grain Count	OPTICAL_F	SSIR No. 42, version 4, page 428	7B1a2	2	NSSL CMS
31	Optical Analysis, Full Count	Optical Analysis, Full Grain Count	OPTICAL_F	SSIR No. 42, version 4, page 428	7B1a2	21	Virgina Tech
32	Fiber Analysis	Organic Fiber Analysis	FIBANAL	SSIR No. 42, version 4, page 371	5C	2	NSSL CMS
32	Fiber Analysis	Organic Fiber Analysis	FIBANAL	SSIR No. 42, version 4, page 371	5C	1	SSL LIMS Version 1.0
33	Particle Density less than 2mm	Particle density less than 2 mm	pd_l2	SSIR No. 42, version 4, page 165	3G1a1	1	SSL LIMS Version 1.0
34	Particle Density >2mm	Particle density >2 mm	pd_g2	SSIR No. 42, version 4, page 165	3G1a2	1	SSL LIMS Version 1.0
34	Particle Density >2mm	Particle density >2 mm	pd_g2	SSIR No. 42, version 4, page 165	3G1a2	33	The Pennsylvania State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
35	pH, KCl	pH, 1N KCl	PHKCL	SSIR No. 42, version 4, page 215	4C1a2a3	25	University of Kentucky
35	pH, KCl	pH, 1N KCl	PHKCL	SSIR No. 42, version 4, page 215	4C1a2a3	2	NSSL CMS
35	pH, KCl	pH, 1N KCl	PHKCL	SSIR No. 42, version 4, page 215	4C1a2a3	1	SSL LIMS Version 1.0
36	pH, NaF	pH, 1N NaF	PHNAF	SSIR No. 42, version 4, page 205	4C1a1a1	1	SSL LIMS Version 1.0
36	pH, NaF	pH, 1N NaF	PHNAF	SSIR No. 42, version 4, page 205	4C1a1a1	2	NSSL CMS
36	pH, NaF	pH, 1N NaF	PHNAF	SSIR No. 42, version 4, page 205	4C1a1a1	13	University of Idaho
37	pH, Oxidized	pH, Oxidized	PHOXID	SSIR No. 42, version 4, page 209	4C1a1a3	1	SSL LIMS Version 1.0
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	1	SSL LIMS Version 1.0
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	30	West Virginia University
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	2	NSSL CMS
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	16	Auburn University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	15	Purdue University
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	26	University of Minnesota
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	22	The Ohio State University
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	18	Michigan Technologic al University
38	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂	PHROUT	SSIR No. 42, version 4, page 213	4C1a2a	40	Iowa State University
39	Phosphate, Water Soluble	Phosphate, Water Soluble	H ₂ OPO ₄	SSIR No. 42, version 4, page 226	4D2a1b1	1	SSL LIMS Version 1.0
40	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	SSIR No. 42, version 4, page 231	4D3a1	1	SSL LIMS Version 1.0
40	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	SSIR No. 42, version 4, page 231	4D3a1	13	University of Idaho
40	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	SSIR No. 42, version 4, page 231	4D3	40	Iowa State University
41	Phosphorus, Bray 2	Phosphorus, Bray 2	BRAY2P	SSIR No. 42, version 4, page 239	4D4a1	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
42	Phosphorus, Citric Acid Extractable	Phosphorus, Citric Acid Extractable	CITACIDP	SSIR No. 42, version 4, page 253	4D7a1	1	SSL LIMS Version 1.0
42	Phosphorus, Citric Acid Extractable	Phosphorus, Citric Acid Extractable	CITACIDP	SSIR No. 42, version 4, page 253	4D7a1	2	NSSL CMS
43	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention	NZPRET	SSIR No. 42, version 4, page 257	4D8a1	1	SSL LIMS Version 1.0
44	Phosphorus, Olsen	Phosphorus, Olsen	OLSENP	SSIR No. 42, version 4, page 242	4D5a1	1	SSL LIMS Version 1.0
44	Phosphorus, Olsen	Phosphorus, Olsen	OLSENP	SSIR No. 42, version 4, page 242	4D5a1	20	University of California, Davis
44	Phosphorus, Olsen	Phosphorus, Olsen	OLSENP	SSIR No. 42, version 4, page 242	4D5a1	21	Virgina Tech
45	PSDA, Dith, Pipet	PSDA, Dith, Pipet	PSDADITH	SSIR No. 42, version 4, page 46	3A1a3a	1	SSL LIMS Version 1.0
46	PSDA, Moist, Dith, Pipet	PSDA, Moist, Dith, Pipet	PSDAMDITH	SSIR No. 42, version 4, page 52	3A1a3b	1	SSL LIMS Version 1.0
47	PSDA, Moist, NaOAc, Pipet	PSDA, Moist, NaOAc, Pipet	PSDAMNAOAC	SSIR No. 42, version 4, page 51	3A1a2b	1	SSL LIMS Version 1.0
48	PSDA, Moist, NaOH, Pipet	PSDA, Moist, NaOH, Pipet	PSDAMNAOH	SSIR No. 42, version 4, page 53	3A1a4b	1	SSL LIMS Version 1.0
49	PSDA, Moist, Pipet	PSDA, Moist, Pipet	PSDAMST	SSIR No. 42, version 4, page 50	3A1a1b	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
49	PSDA, Moist, Pipet	PSDA, Moist, Pipet	PSDAMST	SSIR No. 42, version 4, page 50	3A1a1b	2	NSSL CMS
50	PSDA, Moist, Ultrasonic, Pipet	PSDA, Moist, Ultrasonic, Pipet	PSDAMULTRA	SSIR No. 42, version 4, page 53	3A1a5b	1	SSL LIMS Version 1.0
51	PSDA, NaOAc, Pipet	PSDA, NaOAc, Pipet	PSDANAOAC	SSIR No. 42, version 4, page 46	3A1a2a	1	SSL LIMS Version 1.0
51	PSDA, NaOAc, Pipet	PSDA, NaOAc, Pipet	PSDANAOAC	SSIR No. 42, version 4, page 46	3A1a2a	2	NSSL CMS
52	PSDA, NaOH, Pipet	PSDA, NaOH, Pipet	PSDANAHOH	SSIR No. 42, version 4, page 47	3A1a4a	2	NSSL CMS
52	PSDA, NaOH, Pipet	PSDA, NaOH, Pipet	PSDANAHOH	SSIR No. 42, version 4, page 47	3A1a4a	1	SSL LIMS Version 1.0
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	1	SSL LIMS Version 1.0
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	2	NSSL CMS
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	24	Kansas State University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	20	University of California, Davis



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	17	University of Missouri
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	13	University of Idaho
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	19	University of Florida
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	30	West Virginia University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	25	University of Kentucky
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	33	The Pennsylvania State University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	9	Texas A&M University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	15	Purdue University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	16	Auburn University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	10	University of Illinois
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	35	University of Arkansas
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1	22	The Ohio State University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1a1a	26	University of Minnesota
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1	18	Michigan Technologic al University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1	37	University of Massachuset ts
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1	36	North Dakota State University
53	PSDA, Air-dry, less than 2 mm Particles	PSDA, Routine, Pipet	PSDA	SSIR No. 42, version 4, page 41	3A1	40	Iowa State University
54	PSDA, Ultrasonic, Pipet	PSDA, Ultrasonic, Pipet	PSDAULTRA	SSIR No. 42, version 4, page 47	3A1a5a	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
55	PSDA, Water Dispersible, Air-dry	PSDA, Water Dispersible, Air-dry	H2OPSDAAD	SSIR No. 42, version 4, page 48	3A1a6a	1	SSL LIMS Version 1.0
55	PSDA, Water Dispersible, Air-dry	PSDA, Water Dispersible, Air-dry	H2OPSDAAD	SSIR No. 42, version 4, page 48	3A1a6a	2	NSSL CMS
55	PSDA, Water Dispersible, Air-dry	PSDA, Water Dispersible, Air-dry	H2OPSDAAD	SSIR No. 42, version 4, page 48	3A1a6a	20	University of California, Davis
56	PSDA, Water Dispersible, hydrometer, air-dry	PSDA, Water Dispersible, hydrometer, air-dry	H2OHYDRAD	NULL	PSDAh1	1	SSL LIMS Version 1.0
57	PSDA, Water Dispersible, Moist	PSDA, Water Dispersible, Moist	H2OPSDAM	SSIR No. 42, version 4, page 55	3A1a6b	1	SSL LIMS Version 1.0
57	PSDA, Water Dispersible, Moist	PSDA, Water Dispersible, Moist	H2OPSDAM	SSIR No. 42, version 4, page 55	3A1a6b	2	NSSL CMS
58	Salt Predict	Salt Prediction, 1:2 (w/v)	PREDICT	SSIR No. 42, version 4, page 277	4F1a1a1	1	SSL LIMS Version 1.0
58	Salt Predict	Salt Prediction, 1:2 (w/v)	PREDICT	SSIR No. 42, version 4, page 277	4F1a1a1	2	NSSL CMS
59	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts	SATP	SSIR No. 42, version 4, page 278	4F2	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
59	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts	SATP	SSIR No. 42, version 4, page 278	4F2	1	SSL LIMS Version 1.0
59	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts	SATP	SSIR No. 42, version 4, page 278	4F2	36	North Dakota State University
59	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts	SATP	SSIR No. 42, version 4, page 278	4F2	21	Virgina Tech
60	Sulfur, Total	Sulfur, Total	TOTS	CMS, LIMS, elementar NCS SSIR No. 42, version 4, page 528	6R3c	1	SSL LIMS Version 1.0
60	Sulfur, Total	Sulfur, Total	TOTS	CMS, LIMS, elementar NCS SSIR No. 42, version 4, page 528	6R3c	2	NSSL CMS
61	Surface Area, EGME	Surface Area, EGME	EGME	SSIR No. 42, version 4, page 555	7D2	1	SSL LIMS Version 1.0
62	Clay Mineralogy, TGA	Thermogravimetric Analysis	TGA51	SSIR No. 42, version 4, page 415	7A2a	1	SSL LIMS Version 1.0
62	Clay Mineralogy, TGA	Thermogravimetric Analysis	TGA51	SSIR No. 42, version 4, page 415	7A2a	16	Auburn University
63	Micromorphol ogy, Thin Section	Thin Section	THINSECT	SSIR No. 42, version 4, page 140	3E1	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
64	Total Elemental Analysis	Total Analysis, HF, HNO ₃ , HCl Dissolution	TOTANAL	SSIR No. 42, version 4, page 341	4H1b	1	SSL LIMS Version 1.0
65	Water Retention, 0.06 Bar, Pressure- Plate, less than 2mm	Water Retention, 0.06 Bar, Pressure- Plate, less than 2mm	H2O.06Br.It2	SSIR No. 42, version 4, page 106	3C1a1a	1	SSL LIMS Version 1.0
65	Water Retention, 0.06 Bar, Pressure- Plate, less than 2mm	Water Retention, 0.06 Bar, Pressure- Plate, less than 2mm	H2O.06Br.It2	SSIR No. 42, version 4, page 106	3C1a1a	2	NSSL CMS
66	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	H2O.1Bar.It2	SSIR No. 42, version 4, page 106	3C1b1a	1	SSL LIMS Version 1.0
66	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	H2O.1Bar.It2	SSIR No. 42, version 4, page 106	3C1b1a	2	NSSL CMS
66	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	Water Retention, 0.1 Bar, Pressure- Plate, less than 2mm	H2O.1Bar.It2	SSIR No. 42, version 4, page 106	3C1b1a	20	University of California, Davis



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
66	Water Retention, 0.1 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.1 Bar, Pressure-Plate, less than 2mm	H2O.1Bar.It2	SSIR No. 42, version 4, page 106	3C1b1a	26	University of Minnesota
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	26	University of Minnesota
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	4B1a	36	North Dakota State University
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	20	University of California, Davis
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	9	Texas A&M University
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	33	The Pennsylvania State University
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	2	NSSL CMS
67	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	Water Retention, 0.33 Bar, Pressure-Plate, less than 2mm	H2O.33Br.It2	SSIR No. 42, version 4, page 106	3C1c1a	1	SSL LIMS Version 1.0
68	Water Retention, 1 Bar, Pressure-Plate, less than 2mm	Water Retention, 1 Bar, Pressure-Plate, less than 2mm	H2O1Bar.It2	SSIR No. 42, version 4, page 106	3C1d1a	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
68	Water Retention, 1 Bar, Pressure-Plate, less than 2mm	Water Retention, 1 Bar, Pressure-Plate, less than 2mm	H2O1Bar.lt2	SSIR No. 42, version 4, page 106	3C1d1a	2	NSSL CMS
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	10	University of Illinois
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	33	The Pennsylvania State University
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	9	Texas A&M University
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	25	University of Kentucky



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	30	West Virginia University
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	13	University of Idaho
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	20	University of California, Davis
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	1	SSL LIMS Version 1.0
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	4B2a	36	North Dakota State University
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	26	University of Minnesota
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	4B2a	22	The Ohio State University
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	3C2a1a	21	Virgina Tech
69	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	Water Retention, 15 Bar, Pressure-Plate, less than 2mm	H2O15Bar.lt2	SSIR No. 42, version 4, page 106	4B2a	18	Michigan Technologic al University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
70	Water Retention, 2 Bar, Pressure-Plate, less than 2mm	Water Retention, 2 Bar, Pressure-Plate, less than 2mm	H2O2Bar.It2	SSIR No. 42, version 4, page 106	3C1e1a	1	SSL LIMS Version 1.0
70	Water Retention, 2 Bar, Pressure-Plate, less than 2mm	Water Retention, 2 Bar, Pressure-Plate, less than 2mm	H2O2Bar.It2	SSIR No. 42, version 4, page 106	3C1e1a	2	NSSL CMS
71	Water Retention, ADOD	Water Retention, ADOD	ADOD	SSIR No. 42, version 4, page 132	3D1	33	The Pennsylvania State University
71	Water Retention, ADOD	Water Retention, ADOD	ADOD	SSIR No. 42, version 4, page 132	3D1	1	SSL LIMS Version 1.0
71	Water Retention, ADOD	Water Retention, ADOD	ADOD	SSIR No. 42, version 4, page 132	3D1	2	NSSL CMS
72	Water Retention, Field State	Water Retention, Field State	H2ORETFLD	SSIR No. 42, version 4, page 131	3C3	1	SSL LIMS Version 1.0
72	Water Retention, Field State	Water Retention, Field State	H2ORETFLD	SSIR No. 42, version 4, page 131	3C3	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
73	Clay Mineralogy, X-ray Diffraction	X-ray Diffraction, Thin Film on Glass, Resin Pretreatment	XRAY	SSIR No. 42, version 4, page 399	7A1a1	1	SSL LIMS Version 1.0
74	Total Nitrogen, Carbon and Sulfur	Total N, C, S	NCS_Tot	SSIR No. 42, version 4, page 347	4H2a	1	SSL LIMS Version 1.0
74	Total Nitrogen, Carbon and Sulfur	Total N, C, S	NCS_Tot	SSIR No. 42, version 4, page 347	4H2a	30	West Virginia University
74	Total Nitrogen, Carbon and Sulfur	Total N, C, S	NCS_Tot	SSIR No. 42, version 4, page 347	4H2a	24	Kansas State University
74	Total Nitrogen, Carbon and Sulfur	Total N, C, S	NCS_Tot	SSIR No. 42, version 4, page 347	4H2a	40	Iowa State University
75	Melanic Index	Melanic Index	Melanic	SSIR No. 42, version 4, page 374	5D	1	SSL LIMS Version 1.0
76	Phosphorus, Mehlich III	Phosphorus, Mehlich III	MEHLICH3P	SSIR No. 42, version 4, page 246	4D6a1	1	SSL LIMS Version 1.0
77	Trace Elements	Trace Elements (HNO3 + HCl)	TrElem	SSIR No. 42, version 4, page 324	4H1a	1	SSL LIMS Version 1.0
77	Trace Elements	Trace Elements (HNO3 + HCl)	TrElem	SSIR No. 42, version 4, page 324	4H1a	30	West Virginia University
77	Trace Elements	Trace Elements (HNO3 + HCl)	TrElem	SSIR No. 42, version 4, page 324	4H1a	37	University of Massachusetts



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
78	Major Elements	Major Elements (HF+HNO3+HCl)	MjElem	SSIR No. 42, version 4, page 341	4H1b	30	West Virginia University
78	Major Elements	Major Elements (HF+HNO3+HCl)	MjElem	SSIR No. 42, version 4, page 341	4H1b	1	SSL LIMS Version 1.0
79	Nitrogen, Mineralizable (EPA)	Nitrogen, Mineralizable (EPA)	MINTEPA	SSIR No. 42, version 4, page 265	4D10a1	1	SSL LIMS Version 1.0
81	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Optical Density	OXAL	CMS, SSIR No. 42, version 3, page	8J1b	2	NSSL CMS
82	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Optical Density	OXAL	CMS, SSIR No. 42, version 3, page 279	8J1c	2	NSSL CMS
90	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, weight gain (6E1d)	CACO3	CMS, SSIR No. 42, 1972, page 34	6E1d	2	NSSL CMS
91	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, weight loss (6E1c)	CACO3	CMS, SSIR No. 42, 1972, page 34	6E1c	2	NSSL CMS
91	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, weight loss (6E1c)	CACO3	CMS, SSIR No. 42, 1972, page 34	6E1c	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
92	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, manometer (6E1b)	CACO3	CMS, SSIR No. 42, 1972, page 33	6E1b	36	North Dakota State University
92	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, manometer (6E1b)	CACO3	CMS, SSIR No. 42, 1972, page 33	6E1b	2	NSSL CMS
93	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, manometer, electronic (6E1g)	CACO3	CMS, SSIR No. 42, 1984, page 39	6E1g	2	NSSL CMS
94	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm, manometric (6E1a)	CACO3	CMS, SSIR No. 42, 1972, page	6E1a	2	NSSL CMS
96	CEC and Cations, BaCl ₂ , pH 8.2	CEC, BaCl ₂ , pH 8.2	CECbacl	CMS, SSIR No. 42, 1972, page 23	5A5	2	NSSL CMS
98	CEC and Cations, NaOAc, pH 8.2	CEC, NaOAc, pH 8.2, centrifuge	CECnac	CMS, SSIR No. 42, 1972, page 23	5A2a	2	NSSL CMS
98	CEC and Cations, NaOAc, pH 8.2	CEC, NaOAc, pH 8.2, centrifuge	CECnac	CMS, SSIR No. 42, 1972, page 23	5A2a	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
99	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, direct distillation	CECNH4b	CMS, SSIR No. 42, 1972, page 22	5A1a	37	University of Massachuset ts
99	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, direct distillation	CECNH4b	CMS, SSIR No. 42, 1972, page 22	5A1a	22	The Ohio State University
99	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, direct distillation	CECNH4b	CMS, SSIR No. 42, 1972, page 22	5A1a	2	NSSL CMS
99	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, direct distillation	CECNH4b	CMS, SSIR No. 42, 1972, page 22	5A1a	10	University of Illinois
99	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, direct distillation	CECNH4b	CMS, SSIR No. 42, 1972, page 22	5A1a	25	University of Kentucky
101	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, leaching tube, direct distillation	CECNH4l	CMS, SSIR No. 42, 1972, page 24	5A6a	2	NSSL CMS
103	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, automatic extractor, direct distillation	CECNH4aed	CMS, SSIR No. 42, 1984, page 30	5A8a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
104	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, automatic extractor, steam distillation I	CECNH4aes	CMS, SSIR No. 42, 1984, page 30	5A8b	2	NSSL CMS
104	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, automatic extractor, steam distillation I	CECNH4aes	CMS, SSIR No. 42, 1984, page 30	5A8b	10	University of Illinois
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	10	University of Illinois
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	15	Purdue University
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	25	University of Kentucky
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	17	University of Missouri
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	19	University of Florida
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	22	The Ohio State University
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	21	Virgina Tech
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	35	University of Arkansas
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	37	University of Massachuset ts
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	36	North Dakota State University
112	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine I	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H1a	40	Iowa State University
113	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine II	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2b	40	Iowa State University
113	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine II	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2b	2	NSSL CMS
114	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine III	EXTRACID	CMS, SSIR No. 1, 1984, page 45	6H4a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
115	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine IV, automatic extractor	EXTRACID	CMS, SSIR No. 1, 1984, page 45	6H5a	2	NSSL CMS
115	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine IV, automatic extractor	EXTRACID	CMS, SSIR No. 1, 1984, page 45	6H5a	30	West Virginia University
119	Gypsum, less than 2mm	Gypsum, weight loss	GYP SUM	CMS, SSIR No. 42, 1984, page 41	6F2a	2	NSSL CMS
120	Gypsum, less than 2mm	Gypsum, ion chromatograph	GYP SUM	CMS, SSIR No. 42, 1984, page 41	6F1c	2	NSSL CMS
127	KCl Extract, Al	Cations, Potassium Chloride Extractable I (6G1b)	AL_KCL	CMS, SSIR No. 1, 1972, page 36	6G1b	2	NSSL CMS
128	KCl Extract, Al	Cations, Potassium Chloride Extractable II, overnight (6G2a)	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G2a	2	NSSL CMS
128	KCl Extract, Al	Cations, Potassium Chloride Extractable II, overnight (6G2a)	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G2a	21	Virgina Tech



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
129	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1N, automatic extractor, AA (6G9a)	AL_KCL	CMS, SSIR No. 1, 1984, page 43	6G9a	2	NSSL CMS
129	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1N, automatic extractor, AA (6G9a)	AL_KCL	CMS, SSIR No. 1, 1984, page 43	6G9a	9	Texas A&M University
129	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1N, automatic extractor, AA (6G9a)	AL_KCL	CMS, SSIR No. 1, 1984, page 43	6G9a	19	University of Florida
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO ₄ titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	19	University of Florida
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO ₄ titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	33	The Pennsylvania State University
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	25	University of Kentucky
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	15	Purdue University
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	10	University of Illinois
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	2	NSSL CMS
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	21	Virgina Tech
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	35	University of Arkansas



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	36	North Dakota State University
131	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration	WBC1	CMS, SSIR No. 42, 1972, page 26	6A1a	37	University of Massachusetts
132	Organic Carbon	Organic Carbon, acid dichromate digestion, CO2 evolution, gravimetric	ALLI	CMS, SSIR No. 42, 1972, page 26	6A1b	2	NSSL CMS
133	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration, automatic titrator	WBC2	CMS, SSIR No. 42, 1984, page 34	6A1c	2	NSSL CMS
133	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration, automatic titrator	WBC2	CMS, SSIR No. 42, 1984, page 34	6A1c	18	Michigan Technological University
134	Organic Carbon	Organic Carbon, 6A	unknown	CMS	6A	2	NSSL CMS
136	pH, KCl	pH, 1N KCl	unknown	CMS, SSIR No. 42, 1972, page 59	8C1c	15	Purdue University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
136	pH, KCl	pH, 1N KCl	unknown	CMS, SSIR No. 42, 1972, page 59	8C1c	2	NSSL CMS
136	pH, KCl	pH, 1N KCl	unknown	CMS, SSIR No. 42, 1972, page 59	8C1c	33	The Pennsylvania State University
136	pH, KCl	pH, 1N KCl	unknown	CMS, SSIR No. 42, 1972, page 59	8C1c	19	University of Florida
136	pH, KCl	pH, 1N KCl	unknown	CMS, SSIR No. 42, 1972, page 59	8C1c	37	University of Massachuset ts
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	37	University of Massachuset ts
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	36	North Dakota State University
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	35	University of Arkansas
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	21	Virgina Tech
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	22	The Ohio State University
137	pH, H2O	pH, 1:1 Water	pHH2O	CMS, SSIR No. 42, 1972, page 59	8C1a	19	University of Florida



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	24	Kansas State University
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	33	The Pennsylvania State University
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	9	Texas A&M University
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	25	University of Kentucky
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	20	University of California, Davis
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	2	NSSL CMS
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	17	University of Missouri
137	pH, H ₂ O	pH, 1:1 Water	pHH ₂ O	CMS, SSIR No. 42, 1972, page 59	8C1a	10	University of Illinois
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	2	NSSL CMS
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	20	University of California, Davis
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	25	University of Kentucky



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	33	The Pennsylvania State University
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	17	University of Missouri
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	24	Kansas State University
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	19	University of Florida
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	22	The Ohio State University
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	36	North Dakota State University
139	pH, CaCl ₂	pH, 1:2 0.01M CaCl ₂	pHcacl	CMS, SSIR No. 42, 1972, page 60	8C1e	37	University of Massachuset ts
141	pH, 1:10 H ₂ O	pH, 1:10 Water	pHh2o10	CMS	8C1a	36	North Dakota State University
141	pH, 1:10 H ₂ O	pH, 1:10 Water	pHh2o10	CMS	8C1a	2	NSSL CMS
153	Surface Area	Surface Area, EGME	EGME	CMS, SSIR No. 42, version 3, page 393	7D2	2	NSSL CMS
155	Surface Area	Surface Area, ethylene glycol	SAEG	CMS, SSIR No. 42, 1972, page 56	7D1	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
156	Carbon, Total	Total Carbon, dry combustion, CO2 evolution I, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2a	9	Texas A&M University
156	Carbon, Total	Total Carbon, dry combustion, CO2 evolution I, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2a	2	NSSL CMS
156	Carbon, Total	Total Carbon, dry combustion, CO2 evolution I, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2a	36	North Dakota State University
156	Carbon, Total	Total Carbon, dry combustion, CO2 evolution I, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2a	22	The Ohio State University
157	Carbon, Total	Total Carbon, dry combustion, CO2 evolution II, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2b	35	University of Arkansas
157	Carbon, Total	Total Carbon, dry combustion, CO2 evolution II, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2b	36	North Dakota State University
157	Carbon, Total	Total Carbon, dry combustion, CO2 evolution II, gravimetric	TOTC	CMS, SSIR No. 42, 1972, page 27	6A2b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
159	Carbon, Total	Total Carbon, dry combustion, CO2 evolution IV	TOTC	CMS, SSIR No. 42, version 1, page 238	6A2d	20	University of California, Davis
159	Carbon, Total	Total Carbon, dry combustion, CO2 evolution IV	TOTC	CMS, SSIR No. 42, version 1, page 238	6A2d	2	NSSL CMS
160	Carbon, Total	Total Carbon, dry combustion, CO2 evolution V	TOTC	CMS, SSIR No. 42, version 3, page 223	6A2e	2	NSSL CMS
161	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion, ammonia distillation	TOTN	CMS, SSIR No. 42, 1972, page 29	6B1a	2	NSSL CMS
161	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion, ammonia distillation	TOTN	CMS, SSIR No. 42, 1972, page 29	6B1a	33	The Pennsylvania State University
161	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion, ammonia distillation	TOTN	CMS, SSIR No. 42, 1972, page 29	6B1a	36	North Dakota State University
162	Nitrogen, Total	Total Nitrogen, semimicro Kjeldahl, ammonia distillation	TOTN	CMS, SSIR No. 42, 1972, page 29	6B2a	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
162	Nitrogen, Total	Total Nitrogen, semimicro Kjeldahl, ammonia distillation	TOTN	CMS, SSIR No. 42, 1972, page 29	6B2a	2	NSSL CMS
163	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion I, ammonia distillation, automatic titrator	TOTN	CMS, SSIR No. 42, 1984, page 36	6B1b	2	NSSL CMS
164	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion II, ammonia steam distillation, automatic titrator	TOTN	CMS, SSIR No. 42, 184, page 36	6B3a	2	NSSL CMS
164	Nitrogen, Total	Total Nitrogen, Kjeldahl digestion II, ammonia steam distillation, automatic titrator	TOTN	CMS, SSIR No. 42, 184, page 36	6B3a	18	Michigan Technologic al University
165	Nitrogen, Total	Total Nitrogen, dry combustion, N2 Evolution	TOTN	CMS, SSIR No. 42, version 3, page 227	6B4a	2	NSSL CMS
165	Nitrogen, Total	Total Nitrogen, dry combustion, N2 Evolution	TOTN	CMS, SSIR No. 42, version 3, page 227	6B4a	20	University of California, Davis
166	Nitrogen, Total	Nitrogen, Kjeldahl Digestion III, Ammonia Steam Distillation	TOTN	CMS	6B5a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
168	Phosphorus, Total	Total Phosphorus, perchloric acid digestion	TotP	CMS, SSIR No. 42, 1972, page 49	6S1a	2	NSSL CMS
168	Phosphorus, Total	Total Phosphorus, perchloric acid digestion	TotP	CMS, SSIR No. 42, 1972, page 49	6S1a	19	University of Florida
169	Sulfur, Total	Sulfur, Total, SO2 evolution, KIO3 titration	TOTS	CMS, SSIR No. 42, 1984, page 51	6R3a	2	NSSL CMS
170	Sulfur, Total	Sulfur, Total, SO2 evolution, infrared I	TOTS	CMS, SSIR No. 42, version 1, page 215	6R3b	2	NSSL CMS
177	Water Retention, 15 Bar, less than 2mm, moist	Water Retention, 15 Bar, Pressure- Plate, less than 2mm, moist	H2O15bmless than 2	CMS, SSIR No. 42, 1972, page 17	4B2b	2	NSSL CMS
184	Water Retention, 0.33 Bar, clod	Water Retention, clod, 0.06, 0.1, 0.33, or 1 bar, pressure- plate extraction	H2O.33bclod	CMS, SSIR No. 42, 1984, page 23	4B1c	2	NSSL CMS
184	Water Retention, 0.33 Bar, clod	Water Retention, clod, 0.06, 0.1, 0.33, or 1 bar, pressure- plate extraction	H2O.33bclod	CMS, SSIR No. 42, 1984, page 23	4B1c	10	University of Illinois
184	Water Retention, 0.33 Bar, clod	Water Retention, clod, 0.06, 0.1, 0.33, or 1 bar, pressure- plate extraction	H2O.33bclod	CMS, SSIR No. 42, 1984, page 23	4B1c	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
185	Water Retention, 0.33 Bar, clod, rewet	Water Retention, 0.33 Bar, Pressure-Plate, clod, rewet	H2O.33bcrw	CMS, SSIR No. 42, 1984, page 23	4B1e	2	NSSL CMS
187	Water Retention, Field State	Water Retention, Field State, clod	H2OFSclod	CMS, SSIR No. 42, 1972, page 17	4B4	2	NSSL CMS
187	Water Retention, Field State	Water Retention, Field State, clod	H2OFSclod	CMS, SSIR No. 42, 1972, page 17	4B4	18	Michigan Technologic al University
189	Clay Mineralogy, X-ray Diffraction	X-ray Diffraction, Thin Film on Glass, Resin Pretreatment I	XRAY	CMS 7A2b	7A2b	2	NSSL CMS
190	Clay Mineralogy, X-ray Diffraction	X-ray Diffraction, Thin Film on Glass, Resin Pretreatment II	XRAY	CMS	7A2i	2	NSSL CMS
190	Clay Mineralogy, X-ray Diffraction	X-ray Diffraction, Thin Film on Glass, Resin Pretreatment II	XRAY	CMS	7A2i	30	West Virginia University
192	Derived	Ratio, to Total Clay - 8D1	none	CMS	8D1	2	NSSL CMS
193	Derived	Ratio, to Total Clay - 8D1b	none	CMS	8D1b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
194	Calcium Carbonate Equivalent, 2- 20mm	Calcium Carbonate Equivalent, HCl, 2- 20mm	CACO3_20	CMS	6E4	2	NSSL CMS
195	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1 N, automatic extractor, ICP II (6G9c)	AL_KCL	CMS, SSIR No. 42, version 3, page 259	6G9c	2	NSSL CMS
195	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1 N, automatic extractor, ICP II (6G9c)	AL_KCL	CMS, SSIR No. 42, version 3, page 259	6G9c	30	West Virginia University
195	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1 N, automatic extractor, ICP II (6G9c)	AL_KCL	CMS, SSIR No. 42, version 3, page 259	6G9c	17	University of Missouri
196	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1N, automatic extractor, AA II (6G9d)	AL_KCL	CMS, SSIR No. 42, version 3, page 265	6G9d	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
197	KCl Extract, Al	Cations, Potassium Chloride Extractable, 1 N, automatic extractor, ICP I (6G9b)	AL_KCL	CMS, SSIR No. 42, version 3, page 549	6G9b	2	NSSL CMS
198	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc, 2M KCl displacement	CECdNH4	CMS, duplicate SSIR No. 42, version 4, page 173	4B1a1a	1	SSL LIMS Version 1.0
198	CEC and Cations, Routine	CEC and Cations, NH ₄ OAc, 2M KCl displacement	CECdNH4	CMS, duplicate SSIR No. 42, version 4, page 173	4B1a1a	30	West Virginia University
203	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention I	NZPRET	CMS	6S4	2	NSSL CMS
204	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention II	NZPRET	CMS	6S4b	2	NSSL CMS
205	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention III	NZPRET	CMS	6S4c	2	NSSL CMS
206	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention IV	NZPRET	CMS	6S4d	2	NSSL CMS
207	New Zealand Phosphorus Retention	Phosphorus, New Zealand P Retention V	NZPRET	CMS	6S4e	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
209	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	CMS	6S3b	2	NSSL CMS
210	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	CMS	6S3d	2	NSSL CMS
211	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	CMS	6S3e	2	NSSL CMS
212	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	CMS	6S3f	2	NSSL CMS
213	pH, NaF	pH, 1N NaF, moist	PHNAF	CMS, moist	8C1i	2	NSSL CMS
214	Clay Mineralogy, TGA	Thermogravimetric Analysis, TGA III	TGA51	CMS 7A4c	7A4c	2	NSSL CMS
216	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration, automatic titrator, moist	WBC2	CMS	6A1d	2	NSSL CMS
217	Sulfur, Total	Total Sulfur, SO2 evolution, infrared II	TOTS	SSIR No. 42, version 3, page 317	6R3c	2	NSSL CMS
219	Clay Mineralogy, DSC	Differential Scanning Calorimetry, Thermal Analyzer II	DSC910S	CMS	7A6b	2	NSSL CMS
220	Clay Mineralogy, TGA	Thermogravimetric Analysis	TGA51	CMS 7A4b	7A4b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
227	Soluble Anions, CO ₃	Carbonate, Saturated Paste and Soluble Salts, titration	SatAn1	CMS	6I1b	2	NSSL CMS
228	Soluble Anions	Chloride, Saturation Extraction, Anion Chromatograph	SatAn2	CMS	6K1c	2	NSSL CMS
229	Soluble Anions	Chloride, Saturation Extraction, Anion Chromatograph, Ionic Suppressor	SatAn3	CMS	6K1d	2	NSSL CMS
230	Soluble Anions	Chloride, Saturation Extraction, Flow Injection, Automated Ion Analyzer	SatAn4	CMS	6K1e	2	NSSL CMS
231	Soluble Anions	Chloride, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS	6K1f	2	NSSL CMS
233	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts, EC cap rise	SATPEC2	CMS	8A1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
233	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts, EC cap rise	SATPEC2	CMS	8A1a	36	North Dakota State University
233	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts, EC cap rise	SATPEC2	CMS	8A1a	37	University of Massachuset ts
242	Derived	derived AL_SAT, 5G1b	none	CMS	5G1b	2	NSSL CMS
243	Derived	derived AL_SAT, 5G1	none	CMS	5G1	2	NSSL CMS
244	Derived	derived BSECAT, 5C3b	none	CMS	5C3b	2	NSSL CMS
245	Derived	derived BSECAT, 5C3	none	CMS	5C3	2	NSSL CMS
246	Derived	derived BSESAT, 5C1	none	CMS	5C1	2	NSSL CMS
247	Derived	derived CEC_SUM, 5A3c	none	CMS	5A3c	2	NSSL CMS
248	Derived	derived CEC_SUM, 5A3a	none	CMS	5A3a	2	NSSL CMS
249	Derived	derived COLE, 4D1	none	CMS	4D1	2	NSSL CMS
250	Derived	derived ECEC, 5A3d	none	CMS	5A3d	2	NSSL CMS
251	Derived	derived ECEC, 5A3b	none	CMS	5A3b	2	NSSL CMS
252	Derived	derived est total salts, 8D5	none	CMS	8D5	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
253	Derived	derived NA_EXCH, 5D2	none	CMS	5D2	2	NSSL CMS
254	Derived	derived SAR, 5E	none	CMS	5E	2	NSSL CMS
255	Derived	derived WRD, 4C1b	none	CMS	4C1b	2	NSSL CMS
256	Derived	derived WRD, 4C1	none	CMS	4C1	2	NSSL CMS
257	Unknown	Unknown	none	CMS	NK	2	NSSL CMS
257	Unknown	Unknown	none	CMS	NK	16	Auburn University
257	Unknown	Unknown	none	CMS	NK	33	The Pennsylvania State University
257	Unknown	Unknown	none	CMS	NK	9	Texas A&M University
258	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Aluminum	OXAL	CMS	6G12	2	NSSL CMS
259	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Iron	OXAL	CMS	6C9a	2	NSSL CMS
260	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Silica	OXAL	CMS	6V2b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
261	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Aluminum	OXAL	CMS, SSIR No. 42, version 3, page	6G12b	2	NSSL CMS
262	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Iron	OXAL	CMS, SSIR No. 42, version 3, page	6C9b	2	NSSL CMS
263	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Silica	OXAL	CMS, SSIR No. 42, version 3, page	6V2	2	NSSL CMS
265	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Iron	OXAL	CMS, SSIR No. 42, version 3, page 279	6C9c	2	NSSL CMS
266	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Silica	OXAL	CMS, SSIR No. 42, version 3, page 279	6V2c	2	NSSL CMS
267	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Manganese	OXAL	CMS, SSIR No. 42, version 3, page 279	6D5b	20	University of California, Davis
267	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Manganese	OXAL	CMS, SSIR No. 42, version 3, page 279	6D5b	2	NSSL CMS
268	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Phosphorus	OXAL	CMS, SSIR No. 42, version 3, page 279	6S8a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
269	Organic Carbon	Organic Carbon, 6A1	unknown	CMS	6A1	20	University of California, Davis
269	Organic Carbon	Organic Carbon, 6A1	unknown	CMS	6A1	2	NSSL CMS
269	Organic Carbon	Organic Carbon, 6A1	unknown	CMS	6A1	36	North Dakota State University
269	Organic Carbon	Organic Carbon, 6A1	unknown	CMS	6A1	26	University of Minnesota
269	Organic Carbon	Organic Carbon, 6A1	unknown	CMS	6A1	40	Iowa State University
270	Organic Carbon	Organic Carbon, Peroxide Digestion, Weight Loss	unknown	CMS, SSIR No. 1, 1972, page 29	6A3a	2	NSSL CMS
271	Bulk Density, less than 2mm Fraction, Air-dry	Bulk Density, Air-Dry	unknown	SSIR No. 1, version 1974, page 15	4A1b	2	NSSL CMS
271	Bulk Density, less than 2mm Fraction, Air-dry	Bulk Density, Air-Dry	unknown	SSIR No. 1, version 1974, page 15	4A1b	20	University of California, Davis
272	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 30-cm Absorption	unknown	SSIR No. 1, version 1974, page 15	4A1c	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
273	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 1/3- Bar Desorption I	unknown	SSIR No. 42, version 3, page 121	4A1d	2	NSSL CMS
273	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 1/3- Bar Desorption I	unknown	SSIR No. 42, version 3, page 121	4A1d	36	North Dakota State University
274	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 1/3- Bar Desorption II	unknown	SSIR No. 1, version 1974, page 15	4A1e	2	NSSL CMS
274	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 1/3- Bar Desorption II	unknown	SSIR No. 1, version 1974, page 15	4A1e	10	University of Illinois
275	Bulk Density, less than 2mm Fraction, 1/3 Bar	Bulk Density, 1/3- Bar Desorption III	unknown	SSIR No. 1, version 1974, page 15	4A1f	2	NSSL CMS
276	Bulk Density, less than 2 mm Fraction, 1/10 Bar	Bulk Density, 1/10- Bar Desorption	unknown	SSIR No. 1, version 1974, page 15	4A1g	2	NSSL CMS
277	Bulk Density, less than 2mm Fraction, Ovendry	Bulk Density, Oven-Dry	unknown	SSIR No. 42, version 3, page 127	4A1h	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
277	Bulk Density, less than 2mm Fraction, Ovendry	Bulk Density, Oven-Dry	unknown	SSIR No. 42, version 3, page 127	4A1h	10	University of Illinois
277	Bulk Density, less than 2mm Fraction, Ovendry	Bulk Density, Oven-Dry	unknown	SSIR No. 42, version 3, page 127	4A1h	20	University of California, Davis
277	Bulk Density, less than 2mm Fraction, Ovendry	Bulk Density, Oven-Dry	unknown	SSIR No. 42, version 3, page 127	4A1h	33	The Pennsylvania State University
277	Bulk Density, less than 2mm Fraction, Ovendry	Bulk Density, Oven-Dry	unknown	SSIR No. 42, version 3, page 127	4A1h	36	North Dakota State University
278	Water Retention, 0.1 or 0.33 bar, soil pieces	Water Retention, 0.1 or 0.33 bar, Soil Pieces	unknown	SSIR No. 1, version 1974, page 16	4B1b	2	NSSL CMS
279	Water Retention, cores, 0.06, 0.1, 0.33, or 1 Bar, pressure-plate extraction	Water Retention, cores, 0.06, 0.1, 0.33, or 1 bar, pressure-plate extraction	unknown	SSIR No. 1, version 1974, page 17	4B1d	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
279	Water Retention, cores, 0.06, 0.1, 0.33, or 1 Bar, pressure-plate extraction	Water Retention, cores, 0.06, 0.1, 0.33, or 1 bar, pressure-plate extraction	unknown	SSIR No. 1, version 1974, page 17	4B1d	25	University of Kentucky
280	Water Retention, Water Content less than 2mm, 1 or 2 Bar, moist	Water Retention, Water Content less than 2mm, 1 or 2 Bar, moist	unknown	no desc	4B1f	2	NSSL CMS
281	Water Retention, Sand-Table Absorption	Water Retention, Sand-Table Absorption	unknown	SSIR No. 1, version 1974, page 17	4B3	2	NSSL CMS
282	Aggregate Stability, moist	Aggregate Stability, Wet Sieving, 1-2 mm, moist	unknown	no desc	4G1b	2	NSSL CMS
283	Atterberg Limits moist	Atterberg Limits, NSMC Lab, moist	unknown	no desc	4F1b	2	NSSL CMS
284	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment	CACO3	SSIR No. 42, version 3, page 271	6E1	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
285	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, Sensitive Qualitative Method, Visual, Gas Bubbles	CACO3	SSIR No. 1, version 1974, page 35	6E2a	2	NSSL CMS
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	2	NSSL CMS
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	24	Kansas State University
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	19	University of Florida
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	10	University of Illinois
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	15	Purdue University
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	21	Virgina Tech



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
286	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate, HCl Treatment, Titrimetric	CACO3	SSIR No. 1, version 1974, page 34	6E1e	36	North Dakota State University
287	Extractable Acidity, BaCl2-TEA	Extractable Acidity, BaCl2-Triethanolamine II, Back-Titration with HCl	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2a	35	University of Arkansas
287	Extractable Acidity, BaCl2-TEA	Extractable Acidity, BaCl2-Triethanolamine II, Back-Titration with HCl	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2a	22	The Ohio State University
287	Extractable Acidity, BaCl2-TEA	Extractable Acidity, BaCl2-Triethanolamine II, Back-Titration with HCl	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2a	24	Kansas State University
287	Extractable Acidity, BaCl2-TEA	Extractable Acidity, BaCl2-Triethanolamine II, Back-Titration with HCl	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H2a	2	NSSL CMS
288	Extractable Acidity, BaCl2-TEA	Extractable Acidity, KCl-Triethanolamine II, Back-Titration with NaOH	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H3a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
288	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, KCl- Triethanolamine II, Back-Titration with NaOH	EXTRACID	CMS, SSIR No. 1, 1972, page 38	6H3a	13	University of Idaho
289	Total Elemental Analysis	Total Analysis, Na ₂ CO ₃ Fusion	TOTANAL	SSIR No. 42, version 3, page 667	7C1	2	NSSL CMS
290	Mineral Content	Mineral Content	MINIGNITE	SSIR No. 42, version 3, page 431	8F	2	NSSL CMS
291	pH, KCl	pH, 1:1 1N KCl, moist	PHKCL	CMS, SSIR No. 42, version 3, page 419, moist	8C1k	2	NSSL CMS
292	pH, Routine	pH, Routine, 1:1 Water and 1:2 0.01M CaCl ₂ , moist	PHROUT	SSIR No. 42, version 3, page 415, moist	8C1j	2	NSSL CMS
293	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, Buchner funnel, Displacement Distillation	CECNH4b2	CMS, SSIR No. 42, 1972, page 22	5A1b	2	NSSL CMS
294	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, automatic extractor, steam distillation II	CECNH4aes2	CMS, SSIR No. 42, 1984, page 30	5A8c	2	NSSL CMS
295	CEC and Cations, NH ₄ OAc, pH 7.0	CEC, NH ₄ OAc, pH 7.0, automatic extractor, steam distillation I, moist	CECNH4aesm1	CMS, SSIR No. 42, 1984, page 30	5A8e	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	2	NSSL CMS
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	10	University of Illinois
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	19	University of Florida
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	17	University of Missouri
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	25	University of Kentucky
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	35	University of Arkansas
296	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction	CaExCat1	CMS, SSIR No. 1, 1972, page 42	6N2	36	North Dakota State University
297	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	CaExCat2	CMS, SSIR No. 1, 1972, page 42	6N2a	21	Virgina Tech
297	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	CaExCat2	CMS, SSIR No. 1, 1972, page 42	6N2a	22	The Ohio State University
297	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	CaExCat2	CMS, SSIR No. 1, 1972, page 42	6N2a	25	University of Kentucky
297	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	CaExCat2	CMS, SSIR No. 1, 1972, page 42	6N2a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
298	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Oxalate- Permanganate I	CaExCat3	CMS, SSIR No. 1, 1972, page 42	6N2b	2	NSSL CMS
298	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Oxalate- Permanganate I	CaExCat3	CMS, SSIR No. 1, 1972, page 42	6N2b	36	North Dakota State University
299	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Oxalate- Permanganate II	CaExCat4	CMS, SSIR No. 1, 1972, page 43	6N2c	2	NSSL CMS
300	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Oxalate-Cerate	CaExCat5	CMS, SSIR No. 1, 1972, page 43	6N2d	2	NSSL CMS
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	2	NSSL CMS
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	20	University of California, Davis
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	9	Texas A&M University
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	15	Purdue University
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	16	Auburn University
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	37	University of Massachuset ts
301	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I	CaExCat6	CMS, SSIR No. 42, version 3, page 309	6N2e	35	University of Arkansas
302	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption II	CaExCat7	CMS, SSIR No. 42, version 3, page 313	6N2f	2	NSSL CMS
303	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption I, moist	CaExCat8	CMS, SSIR No. 42, version 3, page 309, moist	6N2g	2	NSSL CMS
304	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, Atomic Absorption II, moist	CaExCat9	CMS, SSIR No. 42, version 3, page 313, moist	6N2h	2	NSSL CMS
305	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, ICP I	CaExCat10	CMS, SSIR No. 42, version 3, page 313, ICP	6N2i	2	NSSL CMS
306	Extractable Cations, Ca	Calcium, NH ₄ OAc Extraction, ICP I, moist	CaExCat11	CMS, SSIR No. 42, version 3, page 313, ICP, moist	6N2j	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
307	Soluble Salts, Ca	Calcium, Saturation Extraction, EDTA Titration	CA_SAT1	CMS, SSIR No. 1, 1972, page 41	6N1a	2	NSSL CMS
307	Soluble Salts, Ca	Calcium, Saturation Extraction, EDTA Titration	CA_SAT1	CMS, SSIR No. 1, 1972, page 41	6N1a	36	North Dakota State University
308	Soluble Salts, Ca	Calcium, Saturation Extraction, Atomic Absorption I	CA_SAT2	CMS, SSIR No. 42, version 3, page 301	6N1b	36	North Dakota State University
308	Soluble Salts, Ca	Calcium, Saturation Extraction, Atomic Absorption I	CA_SAT2	CMS, SSIR No. 42, version 3, page 301	6N1b	2	NSSL CMS
309	Soluble Salts, Ca	Calcium, Saturation Extraction, Atomic Absorption II	CA_SAT3	CMS, SSIR No. 42, version 3, page 305	6N1c	2	NSSL CMS
310	Soluble Salts, Ca	Calcium, Saturation Extraction, Atomic Absorption III	CA_SAT4	CMS, SSIR No. 42, version 3, page 305, PE 300AA	6N1d	2	NSSL CMS
311	Cations, Neutral Salts, Ca	Calcium, NH ₄ Cl- EtOH Extraction, EDTA Titration	CA_NH ₄ CL1	CMS, SSIR No. 1, 1972, page 44	6N3a	2	NSSL CMS
312	KCl Extract, Ca	Calcium, KCl-TEA Extraction, Oxalate- Permanganate	CA_KCL1	CMS, SSIR No. 1, 1972, page 44	6N4a	2	NSSL CMS
313	KCl Extract, Ca	Calcium, KCl-TEA Extraction, EDTA Titration	CA_KCL2	CMS, SSIR No. 1, 1972, page 44	6N4b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
314	KCl Extract, Ca	Calcium, KCl-TEA Extraction, Atomic Absorption	CA_KCL3	CMS, SSIR No. 1, 1972, page 45	6N4c	2	NSSL CMS
315	Soluble Salts, Mg	Magnesium, Saturation Extraction, EDTA Titration	MG_SAT1	CMS, SSIR No. 1, 1972, page 45	6O1a	2	NSSL CMS
315	Soluble Salts, Mg	Magnesium, Saturation Extraction, EDTA Titration	MG_SAT1	CMS, SSIR No. 1, 1972, page 45	6O1a	36	North Dakota State University
316	Soluble Salts, Mg	Magnesium, Saturation Extraction, Atomic Absorption I	MG_SAT2	CMS, SSIR No. 1, 1972, page 45	6O1b	36	North Dakota State University
316	Soluble Salts, Mg	Magnesium, Saturation Extraction, Atomic Absorption I	MG_SAT2	CMS, SSIR No. 1, 1972, page 45	6O1b	2	NSSL CMS
317	Soluble Salts, Mg	Magnesium, Saturation Extraction, Atomic Absorption II	MG_SAT3	CMS, SSIR No. 42, version 3, page 305	6O1c	2	NSSL CMS
318	Soluble Salts, Mg	Magnesium, Saturation Extraction, Atomic Absorption III	MG_SAT4	CMS, SSIR No. 42, version 3, page 305, PE 300AA	6O1d	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	2	NSSL CMS
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	10	University of Illinois
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	19	University of Florida
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	17	University of Missouri
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	25	University of Kentucky
319	Extractable Cations, Mg	Magnesium, NH4OAc Extraction	MgExCat1	CMS, SSIR No. 1, 1972, page 45	6O2	36	North Dakota State University
320	Extractable Cations, Mg	Magnesium, NH4OAc Extraction, EDTA- Alcohol Separation	MgExCat2	CMS, SSIR No. 1, 1972, page 45	6O2a	21	Virgina Tech
320	Extractable Cations, Mg	Magnesium, NH4OAc Extraction, EDTA- Alcohol Separation	MgExCat2	CMS, SSIR No. 1, 1972, page 45	6O2a	22	The Ohio State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
320	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	MgExCat2	CMS, SSIR No. 1, 1972, page 45	6O2a	25	University of Kentucky
320	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, EDTA- Alcohol Separation	MgExCat2	CMS, SSIR No. 1, 1972, page 45	6O2a	2	NSSL CMS
321	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Phosphate Titration	MgExCat3	CMS, SSIR No. 1, 1972, page 46	6O2b	2	NSSL CMS
321	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Phosphate Titration	MgExCat3	CMS, SSIR No. 1, 1972, page 46	6O2b	36	North Dakota State University
322	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Gravimetric	MgExCat4	CMS, SSIR No. 1, 1972, page 46	6O2c	2	NSSL CMS
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	20	University of California, Davis
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	9	Texas A&M University
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	13	University of Idaho
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	16	Auburn University
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	15	Purdue University
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	37	University of Massachuset ts
323	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I	MgExCat6	CMS, SSIR No. 42, version 3, page 309	6O2d	35	University of Arkansas



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
324	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption II	MgExCat7	CMS, SSIR No. 42, version 3, page 313	6O2e	2	NSSL CMS
325	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption II, moist	MgExCat8	CMS, SSIR No. 42, version 3, page 309, moist	6O2f	2	NSSL CMS
326	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Atomic Absorption I, moist	MgExCat9	CMS, SSIR No. 42, version 3, page 313, moist	6O2g	2	NSSL CMS
327	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, ICP I	MgExCat10	CMS, SSIR No. 42, version 3, page 313, ICP	6O2h	2	NSSL CMS
328	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, ICP I, moist	MgExCat11	CMS, SSIR No. 42, version 3, page 313, ICP, moist	6O2i	2	NSSL CMS
329	Cations, Neutral Salts, Mg	Magnesium, NH ₄ Cl-EtOH Extraction, EDTA Titration	MG_NH ₄ CL1	CMS, SSIR No. 1, 1972, page 47	6O3a	2	NSSL CMS
330	KCl Extract, Mg	Magnesium, KCl- TEA Extraction, Phosphate Titration	MGCA_KCL1	CMS, SSIR No. 1, 1972, page 47	6O4a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
331	KCl Extract, Mg	Magnesium, KCl- TEA Extraction, EDTA Titration	MG_KCL2	CMS, SSIR No. 1, 1972, page 47	6O4b	2	NSSL CMS
332	KCl Extract, Mg	Magnesium, KCl- TEA Extraction, Atomic Absorption	MG_KCL3	CMS, SSIR No. 1, 1972, page 47	6O4c	2	NSSL CMS
333	Soluble Salts, Na	Sodium, Saturation Extraction, Flame Photometry	NA_SAT1	CMS, SSIR No. 1, 1972, page 47	6P1a	2	NSSL CMS
333	Soluble Salts, Na	Sodium, Saturation Extraction, Flame Photometry	NA_SAT1	CMS, SSIR No. 1, 1972, page 47	6P1a	36	North Dakota State University
334	Soluble Salts, Na	Sodium, Saturation Extraction, Atomic Absorption I	NA_SAT2	CMS, SSIR No. 1, 1972, page 47	6P1b	36	North Dakota State University
334	Soluble Salts, Na	Sodium, Saturation Extraction, Atomic Absorption I	NA_SAT2	CMS, SSIR No. 1, 1972, page 47	6P1b	2	NSSL CMS
335	Soluble Salts, Na	Sodium, Saturation Extraction, Atomic Absorption II	NA_SAT3	CMS, SSIR No. 42, version 3, page 305	6P1c	2	NSSL CMS
336	Soluble Salts, Na	Sodium, Saturation Extraction, Atomic Absorption III	NA_SAT4	CMS, SSIR No. 42, version 3, page 305, PE 300AA	6P1d	2	NSSL CMS
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	2	NSSL CMS
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	17	University of Missouri



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	10	University of Illinois
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	19	University of Florida
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	25	University of Kentucky
337	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction	NaExCat4	CMS, SSIR No. 1, 1972, page 47	6P2	36	North Dakota State University
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	36	North Dakota State University
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	37	University of Massachuset ts
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	35	University of Arkansas
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	22	The Ohio State University
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	25	University of Kentucky
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	9	Texas A&M University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	13	University of Idaho
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	15	Purdue University
338	Extractable Cations, Na	Sodium, NHOAc Extraction, Flame Photometry	NaExCat5	CMS, SSIR No. 1, 1972, page 47	6P2a	2	NSSL CMS
339	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption I	NaExCat6	CMS, SSIR No. 1, 1972, page 48	6P2b	2	NSSL CMS
339	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption I	NaExCat6	CMS, SSIR No. 1, 1972, page 48	6P2b	16	Auburn University
339	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption I	NaExCat6	CMS, SSIR No. 1, 1972, page 48	6P2b	20	University of California, Davis
339	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption I	NaExCat6	CMS, SSIR No. 1, 1972, page 48	6P2b	35	University of Arkansas
339	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption I	NaExCat6	CMS, SSIR No. 1, 1972, page 48	6P2b	21	Virgina Tech
340	Extractable Cations, Na	Sodium, NH4OAc Extraction, Atomic Absorption II	NaExCat7	CMS, SSIR No. 42, version 3, page 313	6P2c	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
341	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction, Atomic Absorption II, moist	NaExCat8	CMS, SSIR No. 42, version 3, page 309, moist	6P2d	2	NSSL CMS
342	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction, Atomic Absorption I, moist	NaExCat9	CMS, SSIR No. 42, version 3, page 313, moist	6P2e	2	NSSL CMS
343	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction, ICP I	NaExCat10	CMS, SSIR No. 42, version 3, page 313, ICP	6P2f	2	NSSL CMS
344	Extractable Cations, Na	Sodium, NH ₄ OAc Extraction, ICP I, moist	NaExCat11	CMS, SSIR No. 42, version 3, page 313, ICP, moist	6P2g	2	NSSL CMS
345	Soluble Salts, K	Potassium, Saturation Extraction, Flame Photometry	K_SAT1	CMS, SSIR No. 1, 1972, page 48	6Q1a	2	NSSL CMS
345	Soluble Salts, K	Potassium, Saturation Extraction, Flame Photometry	K_SAT1	CMS, SSIR No. 1, 1972, page 48	6Q1a	36	North Dakota State University
346	Soluble Salts, K	Potassium, Saturation Extraction, Atomic Absorption I	K_SAT2	CMS, SSIR No. 1, 1972, page 48	6Q1b	36	North Dakota State University
346	Soluble Salts, K	Potassium, Saturation Extraction, Atomic Absorption I	K_SAT2	CMS, SSIR No. 1, 1972, page 48	6Q1b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
347	Soluble Salts, K	Potassium, Saturation Extraction, Atomic Absorption II	K_SAT3	CMS, SSIR No. 42, version 3, page 305	6Q1c	2	NSSL CMS
348	Soluble Salts, K	Potassium, Saturation Extraction, Atomic Absorption III	K_SAT4	CMS, SSIR No. 42, version 3, page 305, PE 300AA	6Q1d	2	NSSL CMS
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	2	NSSL CMS
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	25	University of Kentucky
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	19	University of Florida
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	17	University of Missouri
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	10	University of Illinois
349	Extractable Cations, K	Potassium, NHOAc Extraction	KExCat4	CMS, SSIR No. 1, 1972, page 48	6Q2	36	North Dakota State University
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	36	North Dakota State University
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	37	University of Massachuset ts



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	35	University of Arkansas
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	22	The Ohio State University
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	15	Purdue University
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	13	University of Idaho
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	25	University of Kentucky
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	9	Texas A&M University
350	Extractable Cations, K	Potassium, NHOAc Extraction, Flame Photometry	KExCat5	CMS, SSIR No. 1, 1972, page 48	6Q2a	2	NSSL CMS
351	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I	KExCat6	CMS, SSIR No. 1, 1972, page 48	6Q2b	2	NSSL CMS
351	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I	KExCat6	CMS, SSIR No. 1, 1972, page 48	6Q2b	20	University of California, Davis



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
351	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I	KExCat6	CMS, SSIR No. 1, 1972, page 48	6Q2b	16	Auburn University
351	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I	KExCat6	CMS, SSIR No. 1, 1972, page 48	6Q2b	35	University of Arkansas
351	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I	KExCat6	CMS, SSIR No. 1, 1972, page 48	6Q2b	21	Virgina Tech
352	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption II	KExCat7	CMS, SSIR No. 42, version 3, page 313	6Q2c	2	NSSL CMS
353	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption II, moist	KExCat8	CMS, SSIR No. 42, version 3, page 309, moist	6Q2d	2	NSSL CMS
354	Extractable Cations, K	Potassium, NHOAc Extraction, Atomic Absorption I, moist	KExCat9	CMS, SSIR No. 42, version 3, page 313, moist	6Q2e	2	NSSL CMS
355	Extractable Cations, K	Potassium, NHOAc Extraction, ICP I	KExCat10	CMS, SSIR No. 42, version 3, page 313, ICP	6Q2f	2	NSSL CMS
356	Extractable Cations, K	Potassium, NHOAc Extraction, ICP I, moist	KExCat11	CMS, SSIR No. 42, version 3, page 313, ICP, moist	6Q2g	2	NSSL CMS
357	KCl Extract, Al	Aluminum, 1 N KCl Extractable, Automatic Extractor, ICP II, moist	AL_KCL	CMS, SSIR No. 42, version 3, page 259, moist	6G9e	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
358	KCl Extract, Al	Aluminum, KCl Extraction I, 30 min., Fluoride Titration	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G1d	2	NSSL CMS
358	KCl Extract, Al	Aluminum, KCl Extraction I, 30 min., Fluoride Titration	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G1d	25	University of Kentucky
358	KCl Extract, Al	Aluminum, KCl Extraction I, 30 min., Fluoride Titration	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G1d	33	The Pennsylvania State University
359	KCl Extract, Al	Aluminum, KCl Extraction I, 30 min., Aluminon I	AL_KCL	CMS, SSIR No. 1, 1972, page 36	6G1a	2	NSSL CMS
360	KCl Extract, Al	Aluminum, KCl Extraction I, 30 min., Atomic Absorption	AL_KCL	CMS, SSIR No. 1, 1972, page 37	6G1e	2	NSSL CMS
361	KCl Extract, Mn	Manganese, 1 N KCl Extractable, Automatic Extractor, Inductively Coupled Plasma Spectrometry II	MN_KCL	CMS, SSIR No. 42, version 3, page 259	6D3b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
361	KCl Extract, Mn	Manganese, 1 N KCl Extractable, Automatic Extractor, Inductively Coupled Plasma Spectrometry II	MN_KCL	CMS, SSIR No. 42, version 3, page 259	6D3b	30	West Virginia University
362	KCl Extract, Mn	Manganese, 1 N KCl Extractable, Automatic Extractor, Inductively Coupled Plasma Spectrometry I	MN_KCL	CMS, SSIR No. 42, version 3, page 549	6D3	2	NSSL CMS
363	KCl Extract, Mn	Manganese, 1 N KCl Extractable, Automatic Extractor, Inductively Coupled Plasma Spectrometry II, moist	MN_KCL	CMS, SSIR No. 42, version 3, page 259, moist	6D3d	2	NSSL CMS
364	Dithionite Extract, Fe	Iron, Dithionite Extraction, Dichromate Titration	FE_DITH	CMS, SSIR No. 1, 1972, page 30	6C1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
364	Dithionite Extract, Fe	Iron, Dithionite Extraction, Dichromate Titration	FE_DITH	CMS, SSIR No. 1, 1972, page 30	6C1a	33	The Pennsylvania State University
365	Dithionite Extract, Fe	Iron, Dithionite Extraction, EDTA Titration	FE_DITH	CMS, SSIR No. 1, 1972, page 30	6C1b	2	NSSL CMS
366	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption I	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2b	2	NSSL CMS
366	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption I	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2b	13	University of Idaho
366	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption I	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2b	20	University of California, Davis
366	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption I	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2b	21	Virgina Tech
366	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption I	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2b	37	University of Massachuset ts



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
367	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Atomic Absorption II	FE_DITH	CMS, SSIR No. 42, version 3, page 239	6C2c	2	NSSL CMS
368	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction I, Atomic Absorption I, moist	FE_DITH	CMS, SSIR No. 1, 1972, page 31, moist	6C2d	2	NSSL CMS
369	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction II, Atomic Absorption II	FE_DITH		6C2f	2	NSSL CMS
370	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction II, Atomic Absorption II, moist	FE_DITH	CMS, SSIR No. 42, version 3, page 239, moist	6C2g	2	NSSL CMS
371	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction II, Atomic Absorption III	FE_DITH		6C2h	2	NSSL CMS
372	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction II, Atomic Absorption III, moist	FE_DITH		6C2i	2	NSSL CMS
373	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate- Bicarbonate Extraction	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C3	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
373	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate- Bicarbonate Extraction	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C3	20	University of California, Davis
373	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate- Bicarbonate Extraction	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C3	19	University of Florida
374	Dithionite Extract, Mn	Manganese, Dithionite Extraction, Permanganate Colorimetry	MN_DITH	CMS, SSIR No. 1, 1972, page 33	6D1a	2	NSSL CMS
375	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction, Atomic Absorption I	MN_DITH	CMS, SSIR No. 1, 1984, page 38	6D2a	2	NSSL CMS
375	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction, Atomic Absorption I	MN_DITH	CMS, SSIR No. 1, 1984, page 38	6D2a	20	University of California, Davis
375	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction, Atomic Absorption I	MN_DITH	CMS, SSIR No. 1, 1984, page 38	6D2a	37	University of Massachuset ts
376	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction I, Atomic Absorption I, moist	MN_DITH	CMS, SSIR No. 1, 1984, page 38, moist	6D2c	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
377	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction II, Atomic Absorption II	MN_DITH		6D2e	2	NSSL CMS
378	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction II, Atomic Absorption II, moist	MN_DITH		6D2f	2	NSSL CMS
379	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction II, Atomic Absorption III	MN_DITH		6D2g	2	NSSL CMS
380	Dithionite- Citrate Extract, Mn	Manganese, Dithionite-Citrate Extraction II, Atomic Absorption III, moist	MN_DITH		6D2h	2	NSSL CMS
381	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction, Atomic Absorption I	AL_DITH	CMS, SSIR No. 1, 1972, page 38	6G7a	2	NSSL CMS
381	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction, Atomic Absorption I	AL_DITH	CMS, SSIR No. 1, 1972, page 38	6G7a	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
381	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction, Atomic Absorption I	AL_DITH	CMS, SSIR No. 1, 1972, page 38	6G7a	37	University of Massachuset ts
382	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction, Atomic Absorption II	AL_DITH	CMS, SSIR No. 42, version 3, page 233	6G7b	2	NSSL CMS
383	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction I, Atomic Absorption I, moist	AL_DITH	CMS, SSIR No. 1, 1972, page 38, moist	6G7c	2	NSSL CMS
384	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction II, Atomic Absorption II	AL_DITH		6G7e	2	NSSL CMS
385	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction II, Atomic Absorption II, moist	AL_DITH	CMS, SSIR No. 42, version 3, page 233, moist	6G7f	2	NSSL CMS
386	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction II, Atomic Absorption III	AL_DITH		6G7g	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
387	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction II, Atomic Absorption III, moist	AL_DITH		6G7h	2	NSSL CMS
388	Acid Oxalate extraction	Iron, Ammonium Oxalate Extraction, Atomic Absorption	OXAL	CMS, SSIR No. 1, 1972, page 33	6C6A	2	NSSL CMS
388	Acid Oxalate extraction	Iron, Ammonium Oxalate Extraction, Atomic Absorption	OXAL	CMS, SSIR No. 1, 1972, page 33	6C6A	20	University of California, Davis
389	Acid Oxalate extraction	Aluminum, Ammonium Oxalate Extraction, Atomic Absorption	OXAL	CMS, SSIR No. 1, 1972, page 37	6G6a	2	NSSL CMS
390	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 37	6G5a	13	University of Idaho
390	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 37	6G5a	2	NSSL CMS
390	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 37	6G5a	37	University of Massachuset ts



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
391	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction II	PYRO	CMS, SSIR No. 1, 1984, page 44	6G10	2	NSSL CMS
391	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction II	PYRO	CMS, SSIR No. 1, 1984, page 44	6G10	19	University of Florida
392	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction II, Atomic Absorption II	PYRO	CMS	6G10c	2	NSSL CMS
393	Na- Pyrophosphate Extract, Al	Aluminum, Sodium Pyrophosphate Extraction II, Atomic Absorption II, moist	PYRO	CMS, moist	6G10d	2	NSSL CMS
394	Na- Pyrophosphate Extract, C	Organic Carbon, Sodium Pyrophosphate Extraction II, Atomic Absorption	PYRO	CMS, SSIR No. 42, version 3, page 247	6A4a	2	NSSL CMS
394	Na- Pyrophosphate Extract, C	Organic Carbon, Sodium Pyrophosphate Extraction II, Atomic Absorption	PYRO	CMS, SSIR No. 42, version 3, page 247	6A4a	19	University of Florida



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
395	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 32	6C5a	13	University of Idaho
395	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 32	6C5a	2	NSSL CMS
395	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction I, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1972, page 32	6C5a	37	University of Massachuset ts
396	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction II, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1984, page 38	6C8a	2	NSSL CMS
396	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction II, Atomic Absorption	PYRO	CMS, SSIR No. 1, 1984, page 38	6C8a	19	University of Florida
397	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction II, Atomic Absorption II	PYRO	CMS	6C8c	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
398	Na- Pyrophosphate Extract, Fe	Iron, Sodium Pyrophosphate Extraction II, Atomic Absorption II, moist	PYRO	CMS, moist	6C8d	2	NSSL CMS
399	Soluble Anions, CO2	Carbonate, Saturation Extraction, Acid Titration	SatAn6	CMS, SSIR No. 1, 1972, page 39	6I1a	2	NSSL CMS
399	Soluble Anions, CO2	Carbonate, Saturation Extraction, Acid Titration	SatAn6	CMS, SSIR No. 1, 1972, page 39	6I1a	36	North Dakota State University
400	Soluble Anions, HCO3	Bicarbonate, Saturation Extraction, Acid Titration	SatAn6	CMS, SSIR No. 1, 1972, page 39	6J1a	36	North Dakota State University
400	Soluble Anions, HCO3	Bicarbonate, Saturation Extraction, Acid Titration	SatAn6	CMS, SSIR No. 1, 1972, page 39	6J1a	2	NSSL CMS
401	Soluble Anions, HCO3	Bicarbonate, Saturation Extraction, Acid Titration, Automatic Extractor	SatAn1	CMS, SSIR No. 42, version 3, page 283	6J1b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
402	Soluble Anions, Cl	Chloride, Saturation Extraction, Mohr Titration	SatAn7	CMS, SSIR No. 1, 1972, page 39	6K1a	2	NSSL CMS
402	Soluble Anions, Cl	Chloride, Saturation Extraction, Mohr Titration	SatAn7	CMS, SSIR No. 1, 1972, page 39	6K1a	36	North Dakota State University
403	Soluble Anions, Cl	Chloride, Saturation Extraction, Potentiometric Titration	SatAn8	CMS, SSIR No. 1, 1972, page 40	6K1b	36	North Dakota State University
403	Soluble Anions, Cl	Chloride, Saturation Extraction, Potentiometric Titration	SatAn8	CMS, SSIR No. 1, 1972, page 40	6K1b	2	NSSL CMS
404	Soluble Anions, SO4	Sulfate, Saturation Extraction, Gravimetric, BaSO4	SatAn9	CMS, SSIR No. 1, 1972, page 40	6L1a	2	NSSL CMS
405	Soluble Anions, SO4	Sulfate, Saturation Extraction, EDTA Titration	SatAn10	CMS, SSIR No. 1, 1972, page 40	6L1b	2	NSSL CMS
406	Soluble Anions, SO4	Sulfate, Saturation Extraction, Anion Chromatograph	SatAn2	CMS, SSIR No. 1, 1984, page 48	6L1c	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
407	Soluble Anions, SO4	Sulfate, Saturation Extraction, Anion Chromatograph, Ionic Suppressor	SatAn3	CMS, SSIR No. 42, version 3, page 287	6L1d	2	NSSL CMS
408	Soluble Anions, SO4	Sulfate, Saturation Extraction, Flow Injection, Automated Ion Analyzer	SatAn4	CMS, SSIR No. 42, version 3, page 287, Flow injection	6L1e	2	NSSL CMS
409	Soluble Anions, SO4	Sulfate, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6L1f	2	NSSL CMS
410	Soluble Anions, NO3	Nitrate, Saturation Extraction, Anion Chromatograph	SatAn2	CMS, SSIR No. 1, 1984, page 48	6M1c	2	NSSL CMS
411	Soluble Anions, NO3	Nitrate, Saturation Extraction, Anion Chromatograph, Ionic Suppressor	SatAn3	CMS, SSIR No. 42, version 3, page 287	6M1d	2	NSSL CMS
412	Soluble Anions, NO3	Nitrate, Saturation Extraction, Flow Injection, Automated Ion Analyzer	SatAn4	CMS, SSIR No. 42, version 3, page 287, Flow injection	6M1e	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
413	Soluble Anions, NO3	Nitrate, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6M1f	2	NSSL CMS
414	Soluble Anions, FI	Fluoride, Saturation Extraction, Anion Chromatograph	SatAn2	CMS, SSIR No. 42, version 3, page 559	6U1a	2	NSSL CMS
415	Soluble Anions, FI	Fluoride, Saturation Extraction, Anion Chromatograph, Ionic Suppressor	SatAn3	CMS, SSIR No. 42, version 3, page 287	6U1b	2	NSSL CMS
416	Soluble Anions, FI	Fluoride, Saturation Extraction, Flow Injection, Automated Ion Analyzer	SatAn4	CMS, SSIR No. 42, version 3, page 287, Flow injection	6U1c	2	NSSL CMS
417	Soluble Anions, FI	Fluoride, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6U1d	2	NSSL CMS
418	Soluble Anions, NO2	Nitrite, Saturation Extraction, Anion Chromatograph	SatAn2	CMS, SSIR No. 42, version 3, page 559	6W1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
419	Soluble Anions, NO2	Nitrite, Saturation Extraction, Anion Chromatograph, Ionic Suppressor	SatAn3	CMS, SSIR No. 42, version 3, page 287	6W1b	2	NSSL CMS
420	Soluble Anions, NO2	Nitrite, Saturation Extraction, Flow Injection, Automated Ion Analyzer	SatAn4	CMS, SSIR No. 42, version 3, page 287, Flow injection	6W1c	2	NSSL CMS
421	Soluble Anions, NO2	Nitrite, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6W1d	2	NSSL CMS
422	Soluble Anions, Br	Bromide, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6X1a	2	NSSL CMS
423	Soluble Anions, OAc	Acetate, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronc Ion Suppressor	6Y1a	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
424	Saturated Paste and Soluble Salts, EC	Saturated Paste, Mixed, Saturation Extract, Automatic Extractor Conductivity, Digital Bridge	SATP	CMS, SSIR No. 42, version 3, page 407	8A3a	2	NSSL CMS
424	Saturated Paste and Soluble Salts, EC	Saturated Paste, Mixed, Saturation Extract, Automatic Extractor Conductivity, Digital Bridge	SATP	CMS, SSIR No. 42, version 3, page 407	8A3a	24	Kansas State University
425	Soluble Anions, NO3	Nitrate, Saturation Extraction, Phenylsulfonic (PDS) Acid Colorimetry	SatAn11	CMS, SSIR No. 1, 1972, page 41	6M1a	2	NSSL CMS
425	Soluble Anions, NO3	Nitrate, Saturation Extraction, Phenylsulfonic (PDS) Acid Colorimetry	SatAn11	CMS, SSIR No. 1, 1972, page 41	6M1a	36	North Dakota State University
426	Atterberg Limits, LL	Plasticity Index, Liquid Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F1	36	North Dakota State University
426	Atterberg Limits, LL	Plasticity Index, Liquid Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F1	2	NSSL CMS
426	Atterberg Limits, LL	Plasticity Index, Liquid Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F1	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
426	Atterberg Limits, LL	Plasticity Index, Liquid Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F1	30	West Virginia University
427	Atterberg Limits, PL	Plasticity Index, Plastic Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F2	13	University of Idaho
427	Atterberg Limits, PL	Plasticity Index, Plastic Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F2	2	NSSL CMS
427	Atterberg Limits, PL	Plasticity Index, Plastic Limit	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F2	36	North Dakota State University
428	Saturated Paste and Soluble Salts, H2O	Water Content, Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 397	8A	36	North Dakota State University
428	Saturated Paste and Soluble Salts, H2O	Water Content, Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 397	8A	13	University of Idaho
428	Saturated Paste and Soluble Salts, H2O	Water Content, Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 397	8A	2	NSSL CMS
429	Saturated Paste and Soluble Salts, pH	Reaction (pH), Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 411	8C1b	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
429	Saturated Paste and Soluble Salts, pH	Reaction (pH), Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 411	8C1b	13	University of Idaho
429	Saturated Paste and Soluble Salts, pH	Reaction (pH), Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 411	8C1b	36	North Dakota State University
430	Saturated Paste and Soluble Salts, resistivity	Soil Resistivity, Saturated Paste	SATP	CMS, SSIR No. 42, version 3, page 427	8E1	2	NSSL CMS
431	Soluble Anions, PO4	Phosphate, Saturation Extraction, Anion Chromatograph, Electronic Ion Suppressor	SatAn5	CMS, SSIR No. 42, version 3, page 287, Anion Chromatography, Electronic Ion Suppressor	6S9a	2	NSSL CMS
433	Water Retention, Field State	Water Retention, Field State	H2Ofield	CMS, SSIR No. 42, version 3, page 169	4B4	2	NSSL CMS
442	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Orthophenanthroli ne Colorimetry	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2a	2	NSSL CMS
442	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Orthophenanthroli ne Colorimetry	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2a	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
442	Dithionite- Citrate Extract, Fe	Iron, Dithionite- Citrate Extraction, Orthophenanthroli ne Colorimetry	FE_DITH	CMS, SSIR No. 1, 1972, page 31	6C2a	33	The Pennsylvania State University
443	Phosphorus, Bray 1	Phosphorus, Bray P-1 Absorbed Phosphorus, Spectrophotometer	BRAYP	CMS, SSIR No. 42, version 3, page 323	6S3	15	Purdue University
443	Phosphorus, Bray 1	Phosphorus, Bray P-1 Absorbed Phosphorus, Spectrophotometer	BRAYP	CMS, SSIR No. 42, version 3, page 323	6S3	10	University of Illinois
443	Phosphorus, Bray 1	Phosphorus, Bray P-1 Absorbed Phosphorus, Spectrophotometer	BRAYP	CMS, SSIR No. 42, version 3, page 323	6S3	2	NSSL CMS
443	Phosphorus, Bray 1	Phosphorus, Bray P-1 Absorbed Phosphorus, Spectrophotometer	BRAYP	CMS, SSIR No. 42, version 3, page 323	6S3	35	University of Arkansas
444	Particles >2 mm, 75 mm Base	Particles >2 mm, Weight Estimates	CFRAG1	CMS, SSIR No. 42, version 3, page 105	3B1	2	NSSL CMS
445	Derived	derived BSESAT, 5C1b	none	CMS, moist	5C1b	2	NSSL CMS
446	Atterberg Limits, PI	derived Plasticity Index	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
446	Atterberg Limits, PI	derived Plasticity Index	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F	30	West Virginia University
446	Atterberg Limits, PI	derived Plasticity Index	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F	13	University of Idaho
446	Atterberg Limits, PI	derived Plasticity Index	AttBg0	CMS, SSIR No. 42, version 3, page 193	4F	21	Virgina Tech
448	Calcium Carbonate Equivalent, less than 20mm	Calcium Carbonate Equivalent, HCl, less than 20mm- 6E4b (derived)	CACO3_20	SSIR No. 42, version 3, page 271	6E4b	2	NSSL CMS
449	Calcium Carbonate Equivalent, less than 20mm	Calcium Carbonate Equivalent, HCl, less than 20mm (derived)	caco3l20	CMS	6E4	2	NSSL CMS
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	13	University of Idaho
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	19	University of Florida
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	25	University of Kentucky
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	XRAY1	33	The Pennsylvania State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	10	University of Illinois
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	XRAY1	16	Auburn University
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	2	NSSL CMS
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	21	Virgina Tech
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	XRAY1	22	The Ohio State University
451	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, unspecified	XRAY	CMS	7A2	26	University of Minnesota
452	Clay Mineralogy, DTA I	Differential Thermal Analysis I	DTA1	CMS 7A3	7A3	2	NSSL CMS
453	Clay Mineralogy, DTA	Differential Thermal Analysis	DTA2	CMS 7A3b	7A3b	2	NSSL CMS
454	Total Elemental Analysis, HF Dissolution	Total Analysis, HF Dissolution	TOTANAL	CMS 7C3	7C3	2	NSSL CMS



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
456	Clay Mineralogy, X- ray Diffraction	X-ray Diffraction, thin film on tile resin pretreatment	XRAY	CMS, 7A2e	7A2e	2	NSSL CMS
457	Acid Oxalate extraction	Cations, Acid Oxalate Extractable, Optical Density	OXAL	CMS	8J	2	NSSL CMS
458	Estimated organic carbon	Estimated Organic Carbon	EOC		Est	2	NSSL CMS
460	Fiber Analysis, pH CaCl ₂	pH, 0.01M CaCl ₂ , Histosol	ph_hist	SSIR No. 42, version 3, page 423	8C2a	2	NSSL CMS
461	Fiber Analysis, Pyrophosphate color	Color, Pyrophosphate Extract	pyr_col	SSIR No. 42, version 3, page 437	8H	2	NSSL CMS
465	Biomass, Roots, C	Biomass, Roots, C	BIOROOT	SSIR No. 42, version 4, page 394	6C1	1	SSL LIMS Version 1.0
466	Biomass, POM, C	Biomass, POM, C	BIOPOM	SSIR No. 42, version 4, page 385	6A4	1	SSL LIMS Version 1.0
467	Biomass, Microbial, C	Biomass, Microbial, C	BIOMASS	SSIR No. 42, version 4, page 388	6B1a1	1	SSL LIMS Version 1.0
468	Biomass, CO ₃ , C	Biomass, CO ₃ , C	BIOCO3	SSIR No. 42, version 4, page 381	6A3a	1	SSL LIMS Version 1.0
469	Extractable Acidity, BaCl ₂ - TEA	Extractable Acidity, BaCl ₂ - Triethanolamine, Centrifuge	EXTRACIDC	SSIR No. 42, version 4, page 194	4B2b1a1	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
470	Biomass, 0.02 M KMnO4 Extractable, C	Biomass, 0.02 M KMnO4 Extractable, C	BIOKMNO4	SSIR No. 42, version 4, page 379	6A2	1	SSL LIMS Version 1.0
471	Phosphorus, Anion Resin Extractable	Anion Resin Extractable Phosphorus	AnResP	SSIR No. 42, version 4, page 219	4D1a1a1a	1	SSL LIMS Version 1.0
472	Electrical Conductivity, 1:20, less than 2 mm Particles	Electrical Conductivity, 1:20 (w/v)	EC20	NULL	EC20	1	SSL LIMS Version 1.0
472	Electrical Conductivity, 1:20, less than 2 mm Particles	Electrical Conductivity, 1:20 (w/v)	EC20	NULL	EC20	19	University of Florida
473	Biomass, Glucose, C	Biomass, Glucose, C	BIOGLUCOSE	SSIR No. 42, version 4, page 376	6A1	1	SSL LIMS Version 1.0
474	Water Retention, 5 Bar, Pressure- Plate, less than 2mm	Water Retention, 5 Bar, Pressure- Plate, less than 2mm	H2O5Barless than 2	New method	3C2b	1	SSL LIMS Version 1.0
475	Phosphorus, Ground/Surfac e Water	Phosphorus, Ground/Surface Water	WatP	SSIR No. 42, version 4, page 352	4I	1	SSL LIMS Version 1.0
476	Elements, Mehlich III	Elements, Mehlich III	EIMehl3	SSIR No. 42, version 4, page 249	4D6b	1	SSL LIMS Version 1.0
477	Elements, Water Extract	Elements, Water Extract	EIWatExtr	NULL	4D2a2d1-22	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
478	Salts, Ground/Surfac e Water	Salts, Ground/Surface Water	WatSalts	SSIR No. 42, version 4, page 352	4I2	1	SSL LIMS Version 1.0
479	Elements, Ground/Surfac e Water	Elements, Ground/Surface Water	EIWat	SSIR No. 42, version 4, page 365	4I3	1	SSL LIMS Version 1.0
480	Phosphorus, Anion Resin Ground/Surfac e Water	Anion Resin Water Phosphorus	AnResPW	SSIR No. 42, version 4, page 219	4D1a1a1a	1	SSL LIMS Version 1.0
481	Equivalent Gypsum Content	Equivalent Gypsum Content	EGC	NULL	4E2b1a1	1	SSL LIMS Version 1.0
482	PSDA, Water Disp, Moist, Ultrasonic, Pipet	PSDA, Water Dispersible, Moist, Ultrasonic, Pipet	H2OPSDAMU	NULL	3A1a7b	1	SSL LIMS Version 1.0
483	PSDA, Water Disp, Air-Dry, Ultrasonic, Pipet	PSDA, Water Dispersible, Air- Dry, Ultrasonic, Pipet	H2OPSDAAU	NULL	3A1a7a	1	SSL LIMS Version 1.0
484	Surface Area N2 Adsorption	Surface Area N2 Adsorption	SA_N2BET	SSIR No. 42, version 4, page 418	7A5a1	1	SSL LIMS Version 1.0
485	PSDA, Air-dry, less than 2 mm Particles	PSDA, no pretreatment, Pipet	PSDA1	Soil Characterization in Indiana, page 13 3A1i	3A1i	15	Purdue University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
485	PSDA, Air-dry, less than 2 mm Particles	PSDA, no pretreatment, Pipet	PSDA1	Soil Characterization in Indiana, page 13 3A1i	3A1i	20	University of California, Davis
486	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration, Mebius	WBC3	Soil Characterization in Indiana, page 19 6A1e	6A1e	15	Purdue University
487	Organic Carbon	Organic Carbon, acid dichromate digestion, FeSO4 titration, Nelson- Sommers	WBC4	Soil Characterization in Indiana, page 20 6A1f	6A1f	15	Purdue University
488	PSDA, Air-dry, less than 2 mm Particles	PSDA, centrifuge	PSDA2	University of Idaho Laboratory Analysis 3A1j - Twelve Soil Orders	PSDA2	13	University of Idaho
489	Phosphorus Isotherm	Phosphorus Isotherm	PIsotherm	University of Idaho Laboratory Analysis - Twelve Soil Orders	PIsotherm	13	University of Idaho
498	1:1 Extract and Soluble Salts	1:1 soil/water Extraction	11SWEX	USDA Handbook 60	SWEX	20	University of California, Davis
498	1:1 Extract and Soluble Salts	1:1 soil/water Extraction	11SWEX	USDA Handbook 60	SWEX	36	North Dakota State University



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
499	PSDA, hydrometer, Air-dry, less than 2 mm Particles	PSDA, Hydrometer, sand fractions wet sieved	PSDA_hyd1	SSSA, Gee and Or, 2002, sand fractions wet sieved	hyd1	20	University of California, Davis
499	PSDA, hydrometer, Air-dry, less than 2 mm Particles	PSDA, Hydrometer, sand fractions wet sieved	PSDA_hyd1	SSSA, Gee and Or, 2002, sand fractions wet sieved	hyd1	21	Virgina Tech
499	PSDA, hydrometer, Air-dry, less than 2 mm Particles	PSDA, Hydrometer, sand fractions wet sieved	PSDA_hyd1	SSSA, Gee and Or, 2002, sand fractions wet sieved	hyd1	35	University of Arkansas
499	PSDA, hydrometer, Air-dry, less than 2 mm Particles	PSDA, Hydrometer, sand fractions wet sieved	PSDA_hyd1	SSSA, Gee and Or, 2002, sand fractions wet sieved	hyd1	36	North Dakota State University
500	PSDA, coulter counter, Air- dry, less than 2 mm Particles	PSDA, coulter counter	PSDA3	University of Idaho Laboratory Analysis - Twelve Soil Orders	PSDA3	13	University of Idaho
501	Mineralogy, X- ray Diffraction Powder Mount	X-ray Diffraction, Powder Mount	XRAYPM	NULL	7A1c1	1	SSL LIMS Version 1.0
502	P-Nitrophenol, β-Glucosidase	P-Nitrophenol, β- Glucosidase	BIOBGLUCO	SSIR No. 42, version 4, page 640	6A5	1	SSL LIMS Version 1.0



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
503	Biomass, Hyper POM, C	Biomass, Hyper POM, C	BIOHPOM	SSIR No. 42, version 4, page 385	6A4	1	SSL LIMS Version 1.0
504	Visible Near Infrared	Visible Near Infrared	VNIR	NULL	7A6	1	SSL LIMS Version 1.0
505	PSDA, Ethanol Disp, Air-Dry, Ultrasonic, Pipet	PSDA, Ethanol Disp, Air-Dry, Ultrasonic, Pipet	EthPSDAAU	NULL	3A1a8a	1	LIMS Version 1.0
506	Soil Color, C standard light source	Soil Color, C	COLOR_C	University of California, Davis analysis – measurement via CR-410	Color_C	20	University of California, Davis
507	Bulk Density, 3D laser scanner	Bulk Density, 3D	DB_3D	Ross et. al (2008)	DB_3D	20	University of California, Davis
508	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate- Bicarbonate Extraction	AL_DITH	Mehra and Jackson (1960)	AL_DITH	19	University of Florida
509	Water Release Curve	Water Release Curve	Wat_Rel_Cur	University of Florida, Soil and Water Sciences Department, EPL, and NRCS (1996)	WatRC	19	University of Florida
510	Mid Infrared	Mid Infrared	MIR	NULL	7A7	1	SSL LIMS Version 1.0
511	Dithionite- Citrate Extract, Al	Aluminum, Dithionite-Citrate Extraction, Aluminon I	AL_DITH	University of Idaho	AL_DITH	13	University of Idaho



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
512	Organic Carbon	Organic Carbon, dry combustion, CO2 evolution, gravimetric	OC	University of Missouri, modified 6A2d	6A2d	17	University of Missouri
512	Organic Carbon	Organic Carbon, dry combustion, CO2 evolution, gravimetric	OC	University of Missouri, modified 6A2d	6A2d	36	North Dakota State University
513	Clay Mineralogy, X-ray Diffraction	X-ray Diffraction, Thin Film on Glass, Filter Peel	XRAY2	NULL	7A1b1	1	SSL LIMS Version 1.0
514	Elements, Xray Fluorescence	Elements, Xray Fluorescence	XRAYF	University of California, Davis – Soils were ground overnight in a ball mill, to approximately flour-like consistency. Ground samples were then placed into sample cups with a polypropylene cover. Samples were then scanned with a Niton portable x-ray fluorescence analyzer.	XRAYF	20	University of California, Davis
515	Calcium Carbonate Equivalent, less than 2mm	Calcium Carbonate Equivalent, HCl, less than 2mm (23b Salinity Lab)	CACO3	CaCO3 equivalent, Procedure 23b, USDA Handbook 60, US. Salinity Lab. 1954.	CACO3	25	University of Kentucky
516	Phosphorus, Bray 1	Phosphorus, Bray 1	BRAYP	Bray (1945)	BRAYP	25	University of Kentucky



procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
517	PSDA, pipette with silt by elutriation, Air-dry, less than 2 mm	PSDA, pipette with silt by elutriation, Air-dry, less than 2 mm	PSDA4	Silt by elutriation, sand by sieving	PSDA4	25	University of Kentucky
518	Water Retention, 0 Bar, Pressure-Plate, less than 2mm	Water Retention, 0 Bar, Pressure-Plate, less than 2mm	H2O0Barless than 2	Water Content at saturation	H2O0Bar	25	University of Kentucky
520	CEC and Cations, Routine	CEC and Cations, NH4OAc	CECNH4_TAMU	modified USDA Handbook 60	CECNH4_TAMU	9	Texas A&M University
521	Saturated Paste and Soluble Salts	Saturated Paste and Soluble Salts	SATP_TAMU	modified USDA Handbook 60	SATP_TAMU	9	Texas A&M University
522	Carbonate, Chittick	Carbonate, Chittick gasometric apparatus	CARB_TAMU	Quantitative gasometric determination of calcite and dolomite by using Chittick apparatus (Dreimanis, 1962)	CARB_TAMU	9	Texas A&M University
522	Carbonate, Chittick	Carbonate, Chittick gasometric apparatus	CARB_TAMU	Quantitative gasometric determination of calcite and dolomite by using Chittick apparatus (Dreimanis, 1962)	CARB_TAMU	22	The Ohio State University
523	OM LOI	Organic Matter by Loss on Ignition	OM_LOI		OMLOI	36	North Dakota State University

procedur ekey	requestedanal name	procedname	procedabbrev	proceddesc	procedcode	sourcesyst emkey	sourcesyste mname
524	Extractable Cations, Mg	Magnesium, NH ₄ OAc Extraction, Colorimetric	MgExCat12	Color was developed by successive additions of hydroxylamine chloride solution, gum Arabic solution, clayton yellow solution and sodium hydroxide solution. Each addition is followed by shaking. The color of the test solution is compared visually with the colors of the calibration standards.	6O2f	35	University of Arkansas

Codelist for metadatadomaindetail

A record in the MetadataDomainDetail table corresponds to a domain. A domain is a fixed set of values to which a column may be restricted. The same domain may serve as the domain for more than one column in a database.

Table C-3.—Codelist for the MetadataDomainDetail table.

DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
520	4	4	active	active	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
520	1	1	not used	not used		0
520	3	3	semiactive	semiactive	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
520	2	2	subactive	subactive	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
520	5	5	superactive	superactive	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	1	1	allitic	allitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	2	35	amorphic	amorphic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	3	2	calcareous	calcareous		1
126	4	3	carbonatic	carbonatic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	7	4	coprogenous	coprogenous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	9	7	ferrihumic	ferrihumic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
126	10	36	ferrihydritic	ferrihydritic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	11	8	ferritic	ferritic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	12	9	ferruginous	ferruginous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	13	10	gibbsitic	gibbsitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	14	37	glassy	glassy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	15	11	glaucinitic	glaucinitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	16	12	gypsic	gypsic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
126	17	13	halloysitic	halloysitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	18	43	hypergypsic	hypergypsic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	19	14	illitic	illitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	21	38	isotic	isotic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	22	16	kaolinitic	kaolinitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	23	39	magnesian	magnesian	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	24	17	marly	marly	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
126	25	18	micaceous	micaceous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	27	20	mixed	mixed	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	28	21	mixed (calcareous)	mixed (calcareous)		1
126	29	22	montmorillonitic	montmorillonitic		1
126	31	34	not used	not used	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	34	41	parasesquic	parasesquic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	37	28	sesquic	sesquic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	38	26	siliceous	siliceous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
126	40	42	smectitic	smectitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
126	42	29	vermiculitic	vermiculitic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	1	5	ashy	ashy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	10	80	ashy-pumiceous	ashy-pumiceous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	11	9	ashy-skeletal	ashy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	13	93	ashy-skeletal over fragmental or cindery	ashy-skeletal over fragmental or cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	14	98	ashy-skeletal over loamy-skeletal	ashy-skeletal over loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	15	101	ashy-skeletal over sandy or sandy-skeletal	ashy-skeletal over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	2	92	ashy over clayey	ashy over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	3	95	ashy over clayey-skeletal	ashy over clayey-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	4	8	ashy over loamy	ashy over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	5	13	ashy over loamy-skeletal	ashy over loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	6	19	ashy over medial	ashy over medial	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	7	81	ashy over medial-skeletal	ashy over medial-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	8	7	ashy over pumiceous or cindery	ashy over pumiceous or cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	9	21	ashy over sandy or sandy-skeletal	ashy over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	16	3	cindery	cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	17	6	cindery over loamy	cindery over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	18	17	cindery over medial	cindery over medial	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	19	15	cindery over medial-skeletal	cindery over medial-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	21	63	clayey	clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	30	38	clayey-skeletal	clayey-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	31	39	clayey-skeletal over sandy or sandy-skeletal	clayey-skeletal over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	25	64	clayey over fragmental	clayey over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	27	68	clayey over loamy	clayey over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	28	66	clayey over loamy-skeletal	clayey over loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	29	65	clayey over sandy or sandy-skeletal	clayey over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	32	105	coarse-gypseous	coarse-gypseous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	33	46	coarse-loamy	coarse-loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	34	49	coarse-loamy over clayey	coarse-loamy over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	35	47	coarse-loamy over fragmental	coarse-loamy over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	36	48	coarse-loamy over sandy or sandy-skeletal	coarse-loamy over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	37	50	coarse-silty	coarse-silty	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	38	53	coarse-silty over clayey	coarse-silty over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	40	52	coarse-silty over sandy or sandy-skeletal	coarse-silty over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	41	69	fine	fine	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	42	106	fine-gypseous	fine-gypseous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	43	54	fine-loamy	fine-loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	44	58	fine-loamy over clayey	fine-loamy over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	45	56	fine-loamy over fragmental	fine-loamy over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	46	57	fine-loamy over sandy or sandy-skeletal	fine-loamy over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	47	59	fine-silty	fine-silty	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	48	62	fine-silty over clayey	fine-silty over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	49	60	fine-silty over fragmental	fine-silty over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	50	61	fine-silty over sandy or sandy-skeletal	fine-silty over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	51	91	fragmental	fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	53	71	hydrous	hydrous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	61	73	hydrous-skeletal	hydrous-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	62	44	loamy	loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	68	33	loamy-skeletal	loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	70	96	loamy-skeletal over cindery	loamy-skeletal over cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	71	36	loamy-skeletal over clayey	loamy-skeletal over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	72	34	loamy-skeletal over fragmental	loamy-skeletal over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	74	35	loamy-skeletal over sandy or sandy-skeletal	loamy-skeletal over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	63	99	loamy over ashly or ashly-pumiceous	loamy over ashly or ashly-pumiceous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	64	111	loamy over coarse-gypseous	loamy over coarse-gypseous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	65	112	loamy over fine-gypseous	loamy over fine-gypseous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	66	55	loamy over pumiceous or cindery	loamy over pumiceous or cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	67	45	loamy over sandy or sandy-skeletal	loamy over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	75	10	medial	medial	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	87	82	medial-pumiceous	medial-pumiceous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	88	11	medial-skeletal	medial-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	89	94	medial-skeletal over fragmental or cindery	medial-skeletal over fragmental or cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	90	100	medial-skeletal over loamy-skeletal	medial-skeletal over loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	91	102	medial-skeletal over sandy or sandy-skeletal	medial-skeletal over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	76	83	medial over ashy	medial over ashy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	78	14	medial over clayey	medial over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	79	84	medial over clayey-skeletal	medial over clayey-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	80	16	medial over fragmental	medial over fragmental	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	81	85	medial over hydrous	medial over hydrous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	82	18	medial over loamy	medial over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	83	20	medial over loamy-skeletal	medial over loamy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	84	12	medial over pumiceous or cindery	medial over pumiceous or cindery	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	85	22	medial over sandy or sandy-skeletal	medial over sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	92	2	not used	not used	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	96	90	pumiceous or ashy-pumiceous over medial	pumiceous or ashy-pumiceous over medial	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	97	89	pumiceous or ashy-pumiceous over medial-skeletal	pumiceous or ashy-pumiceous over medial-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	99	40	sandy	sandy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	103	30	sandy-skeletal	sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	105	31	sandy-skeletal over loamy	sandy-skeletal over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	100	41	sandy or sandy-skeletal	sandy or sandy-skeletal	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	101	43	sandy over clayey	sandy over clayey	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	102	42	sandy over loamy	sandy over loamy	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
127	106	24	thixotropic	thixotropic		1
127	111	25	thixotropic-skeletal	thixotropic-skeletal		1



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
127	113	70	very-fine	very-fine	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
521	1	1	aniso	aniso	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
521	3	2	not used	not used	Used to indicate that the soil does not qualify as aniso.	0
128	1	3	acid	acid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
128	2	4	allic	allic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
128	3	9	calcareous	calcareous	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
128	4	5	dysic	dysic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
128	5	6	euic	euic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
128	6	7	nonacid	nonacid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
128	8	2	not used	not used		0
185	1	1	frigid	frigid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	2	11	hypergelic	hypergelic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	3	2	hyperthermic	hyperthermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	4	3	isofrigid	isofrigid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	5	4	isohyperthermic	isohyperthermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
185	6	5	isomesic	isomesic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	7	6	isothermic	isothermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	8	7	mesic	mesic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	10	12	pergelic	pergelic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	11	13	subgelic	subgelic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
185	12	8	thermic	thermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	1	1	cryic	cryic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
188	3	2	frigid	frigid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	4	13	gelic	gelic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	5	3	hyperthermic	hyperthermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	6	4	isofrigid	isofrigid	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	7	5	isohyperthermic	isohyperthermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	8	6	isomesic	isomesic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	9	7	isothermic	isothermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0



DomainID	ChoiceSequence	ChoiceValue	ChoiceName	ChoiceLabel	ChoiceDescription	ChoiceObsolete
188	10	8	mesic	mesic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0
188	13	10	thermic	thermic	Reference: Keys to Soil Taxonomy Thirteenth Edition, Soil Survey Staff, USDA, Natural Resources Conservation Service	0

Annex D: Bibliography

The following documents contain provisions that are relevant to two or more parts of the Framework Data Content Standard. References applicable to a single part are reported in the respective part of the standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies.

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