Data Element Import Guide

When creating a form structure, new and existing data elements can be imported into the BRICS dictionary and attached directly to a user's form structure, bypassing the need to navigate the "Create Data Element" workflow for each new data element. To import elements into the dictionary, use the Data Element Import Template. From Excel, you may create one data element per row. When you have finished creating your data elements, you may upload them to the BRICS dictionary by attaching them to a new or existing (draft) form structure. Please note that all data elements must conform to the guidelines in this document or they will not be accepted into the BRICS dictionary.

Data Element Guide

I. Name (Variable name)

A. The name of the data element within the FITBIR dictionary.

B. Restrictions:

1. Required for all data elements
2. 30 character maximum
3. Must be unique to all data elements in the FITBIR dictionary
4. The first character must be an alphabetical character a-z or A-Z
5. Must contain only alphanumeric characters and the special character underscore (_)

II. Title (CDE name)

A. A descriptive title for the data element

B. Restrictions

1. Required for all data elements.
2. 255 character maximum

III. Category

A. A designation of the data element as a Common Data Element (CDE) or Unique Data Element (UDE)

B. Restrictions

1. Required for all data elements
2. Must be one of the following:
   a) *Common Data Element*
   b) *Unique Data Element*

IV. Description

A. A full description of the data element

B. Restrictions:

1. Required for all data elements
2. 4000 character maximum

V. Short Description

A. A short description of the data element

B. Restrictions:

1. Required for all data elements
2. 255 character maximum

VI. Data Type

A. Data Type determines the type of data this data element will store. User can select between alphanumeric, numeric, dates, GUIDs, files, or thumbnails (image only files).

B. Restrictions:

1. Required for all data elements
2. Must be one of the following character strings:
    a) *Alphanumeric*
    b) *Numeric Values*
    c) *Date or Date & Time*
    d) *GUID*
    e) *File*
    f) *Thumbnail*

VII. Size

A. The size field determines the maximum amount of characters a user may input into a Free-Form, alphanumeric data element.

B. Restrictions:

1. Mandatory field for data elements with Data Type: Alphanumeric and Input Restrictions: Free-Form
2. This field must be blank for other Data Types or Input Restrictions
3. This field must contain a numerical value between 1 and 4000. Be sure to set appropriate parameters (i.e., Social Security Number should have a size of 9)

VIII. Input Restrictions

A. This field determines the type of input that will be accepted. Free-form elements allow for short and paragraph answer input, and Pre-Defined Values force the user to select an input from the Permissible Values List.

B. Restrictions:

1. Required for all data elements
2. Must be one of the following character strings:
   a) *Free-Form Entry*
   b) *Multiple Pre-Defined Values Selected*
   c) *Single Pre-Defined Value Selected*

IX. Maximum/Minimum Value

A. For a Free-Form, numerical data element, a user may specify a range of valid values by inputting a minimum and maximum value.

B. Restrictions:

1. Only input data to these fields for data elements with Data Type: Numeric Values and Input Restrictions: Free-Form
2. These fields are always optional
3. These fields must contain numbers
4. The Minimum Value field must be less than the Maximum Value field

X. Permissible Values

A. A list of values that can be used as valid input for this data element

B. Restrictions:

1. Mandatory field for data elements with Input Restrictions: Multiple Pre-Defined Values Selected or Single Pre-Defined Value Selected
2. Must contain a semi-colon delimited list of all possible permissible values for the data element

XI. Permissible Value Descriptions

A. A list of descriptions that matches with the list of permissible values above

B. Restrictions:

1. Mandatory field for data elements with Input Restrictions: Multiple Pre-Defined Values Selected or Single Pre-Defined Value Selected

2. Must contain a semi-colon delimited list of permissible value descriptions The semi-colon character **cannot** be used in descriptions.

3. The Permissible Value Descriptions list must have the same amount of descriptions as there are Permissible Values in the Permissible Value list.

4. The descriptions must match the order of the permissible values. If for one or more permissible values in the list, there are no descriptions, simply include the permissible value itself in the description list as a place-holder.

XII. Measurement Type

A. For any entry type that must be recorded as a specific unit of measurement, a Measurement Type should be provided in the form of a "Unit Name." See below table for an example:

Unit Type	Unit Name	Abbreviation	Factor of Base (if applicable)
Length	Meter	m	1

1. Only one measurement type can be entered into this column for each data element.

***NB: See Appendix A for the current complete list of measurement types. If the data elements you are working with have measurement types that are not included in this list, please let FITBIR Ops know and we will have it added.**

XIII. Guidelines/Instructions

A. Contains any information useful for data collection and properly gathering input for this data element

B. Restrictions:

1. 4000 character maximum

XIV. Notes

A. Any extra notes or messages related to this data element may be placed here.

B. Restrictions:

1. 4000 character maximum

C. If notes pertain to a specific disease type, be sure to indicate to which disease type the note refers.

XV. Suggested Question Text

A. May contain one or more suggested questions a researcher may ask a patient or subject to get the proper input for this data element

B. Restrictions:

1. 4000 character maximum

2. If question is disease-type specific, be sure to indicate the disease-type to which the question pertains.

XVI. Keywords

A. A list of keywords associated with this data element

B. Restrictions:

1. List of keywords must be in a semi-colon delimited list

2. Keywords cannot contain a semi-colon character

3. Keywords cannot have a space

XVII. References

A. Any external references related to this data element may be placed here.

B. Restrictions:

1. 4000 character maximum

C. If references are disease specific, be sure to indicate to which disease-type they pertain.

XVIII. External ID.LOINC

A. A LOINC ID associated with this data element.

B. See http://loinc.org/ for more information

XIX. External ID.SNOMED

A. A SNOMED ID associated with this data element.

B. See http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html for more information

XX. External ID.caDSR

A. A caDSR ID associated with this data element.

B. See https://cabig.nci.nih.gov/concepts/caDSR/ for more information

XXI. External ID.CDISC

A. A CDISC ID associated with this data element.

B. See http://www.cdisc.org for more information

XXII. External ID.NINDS

A. A NINDS ID # associated with this data element.

XXIII. Population.All

A. The target population group for this data element

B. Restrictions:

1. Required for all data elements
2. Must be one of the following character strings:
   a) *Adult*
   b) *Pediatric*
   c) *Adult;Pediatric* (this is used when "Adult and Pediatric " are found in NINDS)

XXIV. Domain.Disease (For example: Domain.Stroke)

A. The general Domain (and Sub-Domain) of a data element

B. Restrictions:

1. Required for all data elements
2. For a list of valid Domains and Sub-Domains, please refer to the NINDS CDE website http://www.commondataelements.ninds.nih.gov/#page=Default

C. Format:

1. Input must be in Domain.Sub-Domain format.
   a) For example, under the column heading Domain.Stroke, the value entered could be Outcomes and End Points.Quality of Life

      Note: Each Domain has one or more sub-domains.
2. An element can have only (1) Domain.Sub-Domain per disease.

xxv. Classification.Disease (For example: Classification.Eplilepsy)

A. There are 4 classification categories designated for NINDS data elements. The classifications vary with the Disease. (*Core, Basic, Supplemental, Exploratory)*

B. There can only be one Classification per disease (or sub-disease if present).

APPENDIX A: MEASUREMENT TYPES

Unit Type	Unit Name	Abbreviation	UCUM Code (if available)
Substance Fraction Unit	International Units Per Liter	IU/L	[iU]/L
Substance Fraction Unit	Thousands Per Micro Liter	K/uL	10*3/uL
Substance Fraction Unit	Millions per micro liter	M/uL	10*6/uL
Substance Fraction Unit	Femtoliter	fL	fL
Substance Fraction Unit	Grams per decileter	g/dL	g/dL
Substance Fraction Unit	Grams per liter	g/L	g/L
Substance Fraction Unit	Grams per milliliter	g/mL	g/mL
Substance Fraction Unit	Milli international units per milliliter	mIU/mL	m[iU]/mL
Substance Fraction Unit	Milli equivalents per liter	mEq/L	meq/L
Substance Fraction Unit	Milligrams per Deciliter	mg/dL	mg/dL
Substance Fraction Unit	Millimoles per kilogram	mmol/kg	mmol/kg
Substance Fraction Unit	Millimoles per liter	mmol/L	mmol/L
Substance Fraction Unit	MilliOsmolesPerKiloGram	mosm/kg	mosm/kg
Substance Fraction Unit	Nanograms per milliliter	ng/mL	ng/mL
Substance Fraction Unit	Nanomoles per liter	nmol/L	nmol/L
Substance Fraction Unit	Picograms per milliliter	pg/mL	pg/mL
Substance Fraction Unit	Picomoles per liter	pmol/L	pmol/L
Substance Fraction Unit	Units per liter	U/L	U/L
Substance Fraction Unit	Microinternatonal units per milliliter	uIU/mL	u[iU]/mL
Substance Fraction Unit	Micrograms per deciliter	ug/dL	ug/dL
Substance Fraction Unit	Micrograms per liter	ug/L	ug/L
Substance Fraction Unit	Micrograms per milliliter	ug/mL	ug/mL
Substance Fraction Unit	Micromoles per liter	umol/L	umol/L
Substance Fraction Unit	Picomoles per micromole	pmol/umol	pmol/umol
Substance Fraction Unit	Nanomoles per millimole	nmol/mmol	nmol/mmol
Substance Fraction Unit	Nanmoles per millimole Creatinine	nmol/mmol Cre	nmol/mmol{Cre}
Substance Fraction Unit	Nanmoles per mole	nmol/mol	nmol/mol
Substance Fraction Unit	Micromoles per mole	umol/mol	umol/mol
Substance Fraction Unit	Millimoles per mole	mmol/mol	mmol/mol
Substance Fraction Unit	Millimoles per mole Creatinine	mmol/mol Cre	mmol/mol{Cre}
Substance Fraction Unit	Micromoles per mole Creatinine	umol/mol Cre	umol/mol{Cre}
Substance Fraction Unit	Equivalents per micromole	eq/umol	eq/umol
Substance Fraction Unit	Equivalents per millimole	eq/mmol	eq/mmol
Substance Fraction Unit	Bone collagen equivalents per millimole Creatinine	BCE/mmol Cre	{BoneCollagen}eq/mmol{Cre}

Substance Fraction Unit	Bone collagen equivalents per micromole Creatinine	BCE/umol Cre	{BoneCollagen}eq/umol{Cre}
Volume Fraction Unit	Volume percent	Volme %	%{vol}
Volume Fraction Unit	Percent Oxygen	% Oxygen	%{Oxygen}
Volume Fraction Unit	Milliliters per deciliter	cc/dL	mL/dL
Mass or Substance Rate Fraction Units	Percent Excretion	% Excretion	%{Excretion}
Mass or Substance Rate Fraction Units	Percent Uptake	% Uptake	%{Uptake}
Rate	Rate of Centrifugation	Revolutions per minute	rpm
Rate	Bloodflow	Liters/minute	
Rate	Speed	Miles/hour	
Mass Content Unit	Micrograms per nano gram	ug/ng	ug/ng
Mass Content Unit	Nanograms per milligram	ng/mg	ng/mg
Mass Content Unit	Nanograms per milligram protein	ng/mg Prot	ng/mg{Protein}
Mass Content Unit	Micrograms per milligram Creatinine	ug/mg Cre	ug/mg{Cre}
Mass Content Unit	Milligrams per milligram	mg/mg	mg/mg
Mass Content Unit	Milligrams per milligram Creatinine	mg/mg Cre	mg/mg{Cre}
Mass Content Unit	Nanograms per gram	ng/g	ng/g
Mass Content Unit	Nanogams per gram Creatinine	ng/g Cre	ng/g{Cre}
Mass Content Unit	Micrograms per gram	ug/g	ug/g
Mass Content Unit	Microgram per 100 gram	ug/100 g	ug/[100]g
Mass Content Unit	Microgram per gram Dry Weight	ug/g Dry Weight	ug/g{DryWeight}
Mass Content Unit	Microgram per gram Creatinine	ug/g Cre	ug/g{Cre}
Mass Content Unit	Micrograms per gram Hemoglobin	ug/g Hgb	ug/g{Hgb}
Mass Content Unit	Milligrams per gram	mg/g	mg/g
Mass Content Unit	Milligram per gram Creatinine	mg/g Cre	mg/g{Cre}
Mass Content Unit	Grams per gram	g/g	g/g
Mass Content Unit	Nanograms per kilogram	ng/kg	ng/kg
Mass Content Unit	Micrograms per kilogram	ug/kg	ug/kg
Mass Content Unit	Milligrams per kilogram	mg/kg	mg/kg
Mass Content Unit	Grams per kilogram	g/kg	g/kg
Mass Content Unit	Grams per 100 gram	g/100g	g/[100]g
Mass Content Unit	Grams per gram Creatinine	g/g Cre	g/g{Cre}

Temperature	Degree Celsius	C	Cel
Temperature	Degree Farenheit	F	[degF]
Temperature	Degree Kelvin	K	K
Pressure	Millimeters of Mercury	mmHg	mm[Hg]
Pressure	Kilo pascal	kPa	kPa
Pressure	Pounds per square inch	psi	psi
Mass	Picogram	pg	pg
Mass	Femtogram	fg	fg
Mass	Nanogram	ng	ng
Mass	Microgram	ug	ug
Mass	Micrograms per total volume	ug/Total Volume	ug/{Total Volume}
Mass	Micrograms per specimen	ug/Spec	ug/{Specimen}
Mass	Millgram	mg	mg
Mass	Milligrams per volume	mg/Volume	mg/{Volume}
Mass	Milligrams per total volume	mg/Total Volume	mg/{Total Volume}
Mass	Gram	g	g
Mass	Grams per total weight	g/Total Weight	g/{Total Weight}
Mass	Decigram	dg	dg
Mass	Centigram	cg	cg
Mass	Kilogram	kg	kg
Mass	Metric Ton	Metric Ton	t
Mass	Picrograms per millimeter	pg/mm	
Thermal Resistance	Kelvin per watt	K/Watt	K/W
Time	Picosecond	ps	ps
Time	Nanosecond	ns	ns
Time	Microsecond	us	us
Time	Millisecond	ms	ms
Time	Second	sec	s
Time	Kilosecond	ks	ks
Time	Megasecond	Ms	Ms
Time	Minute	min	min
Time	Hour	h	h
Time	Day	d	d
Time	Week	wk	wk
Time	Month	Mo	mo
Time	Year	yr	a
Substance	Mole	mol	mol

Substance	Millimole	mmol	mmol
Substance	Millimoles per total volume	mmol/Total Volume	mmol/{TotalVolume}
Substance	Femtomole	fmol	fmol
Substance	Picomole	pmol	pmol
Substance	Micromole	umol	umol
Substance	Nanomole	nmol	nmol
Substance	Milliosmole	mosm	mosm
Areic Substance Unit	Milliequivalents per square meter	meg/m^2	meq/m2
Areic Substance Unit	Millimoles per square meter	mmol/m^2	mmol/m2
Area	Square Inch	in^2	[sin_i]
Area	Square Feet	ft^2	[sft_i]
Area	Square Yard	yd^2	[syd_i]
Area	Square Millimeter	mm^2	mm2
Area	Square Centimeter	cm^2	cm2
Area	Square Meter	m^2	m2
Volume	Femtoliter	fL	fL
Volume	Picoliter	pL	pL
Volume	Nanoliter	nL	nL
Volume	Microliter	uL	uL
Volume	Milliliter	mL	mL
Volume	Milliliters per heartbeat	mL/heart beat	mL/{h`b}
Volume	Liter	L	L
Volume	Deciliter	dL	dL
Volume	Centiliter	cL	cL
Volume	Kiloliter	kL	kL
Volume	Hectoliter	hL	hL
Volume	Cubic millimeter	mm^3	
Volume	Cubic centimeter	cm^3	
Volume Duration	Liter square second per second	L s^2/s	L.s2/s
Number Content Units	Per milligram	/mg	/mg
Number Content Units	Per gram	/g	/g
Number Content Units	Per gram Creatinine	/g Cre	/g{creat}
Number Content Units	Per gram Hemoglobin	/g Hgb	/g{HGB}
Number Content Units	Per gram total Nitrogen	/g Total Nitrogen	/g{tot`nit}
Number Content Units	Per gram total Protein	/g Total Protein	/g{tot`prot}
Number Content Units	Per gram Wet Tissue	/g Wet Tissue	/g{wet`tis}

Number Content Units	Per kilogram	/kg	/kg
Number Content Units	Per kilogram body weight	/kg Body Weight	/kg{body`wt}
Substance Content Unit	Femtomoles per milligram	fmol/mg	fmol/mg
Substance Content Unit	Nanomoles per milligram	nmol/mg	nmol/mg
Substance Content Unit	Micromoles per milligram	umol/mg	umol/mg
Substance Content Unit	Micromoles per milligram Creatinine	umol/mg Cre	umol/mg{Cre}
Substance Content Unit	Moles per kilogram	mol/kg	mol/kg
Substance Content Unit	Femtomoles per gram	fmol/g	fmol/g
Substance Content Unit	Nanmoles per gram	nmol/g	nmol/g
Substance Content Unit	Nanmoles per gram Creatinine	nmol/g Cre	nmol/g{Cre}
Substance Content Unit	Micromoles per gram	umol/g	umol/g
Substance Content Unit	Micromoles per gram Creatinine	umol/g Cre	umol/g{Cre}
Substance Content Unit	Micromoles per gram Hemoglobin	umol/g Hgb	umol/g{Hgb}
Substance Content Unit	Millimoles per gram	mmol/g	mmol/g
Substance Content Unit	Millimoles per kilogram	mmol/kg	mmol/kg
Substance Content Unit	Osmoles per kilogram	osm/kg	osm/kg
Substance Rate Content Unit	Milliosmoles per kilogram	mosm/kg	mosm/kg
Substance Rate Content Unit	Milliequivalents per gram	meq/g	meq/g
Substance Rate Content Unit	Milliequivalents per gram Creatinine	meq/g Cre	meq/g{Cre}
Substance Rate Content Unit	Milliequivalents per kilogram	meq/kg	meq/kg
Arbitrary Concentration Content Units	International Units per gram	IU/g	[iU]/g
Arbitrary Concentration Content Units	International Units per gram Hemoglobin	IU/g Hgb	[iU]/g{Hgb}
Arbitrary Concentration Content Units	Ehrlich Units per 100 gram	EU/100 g	{Ehrlich_U}/100g
Arbitrary Concentration Content Units	International Units per kilogram	IU/kg	[iU]/kg
Arbitrary Concentration Content Units	Micromoles per minute per gram	umol/min/g	umol/min/g
Arbitrary Concentration Content Units	Milliunits per gram	mU/g	mU/g
Arbitrary Concentration Content Units	Milliunits per gram Hemoglobin	mU/g Hgb	mU/g{Hgb}
Arbitrary Concentration Content Units	Units per gram	U/g	U/g

Arbitrary Concentration Content Units	Units per gram Hemoglobin	U/g Hgb	U/g{Hgb}
Arbitrary Concentration Content Units	Uniter per gram Creatinine	U/g Cre	U/g{Cre}
Arbitrary Concentration Content Units	Milliunits per milligram Creatinine	mU/mg Cre	mU/mg{Cre}
Arbitrary Concentration Content Units	Milliunits per milligram	mU/mg	mU/mg
Arbitrary Concentration Content Units	Kilounits per gram	kU/g	kU/g
Arbitrary Concentration Content Units	Katal per kilogram	kat/kg	kat/kg
Volume Content Units	Milliliters per kilogram	mL/kg	mL/kg
Volume Content Units	Liters per kilogram	L/kg	L/kg
Energy Content Units	Kilocalories per ounce	Kcal/oz	kCal/[oz_av]
Aeric Number Units	Per square meter	/m^2	/m2
Areic Mass Units	Grams per square meter	g/m^2	g/m2
Areic Mass Units	Kilograms per square meter	kg/m^2	kg/m2
Areic Mass Units	Micrograms per square meter	ug/m^2	ug/m2
Areic Mass Units	Milligrams per square meter	mg/m^2	mg/m2
Areic Mass Units	Nanograms per square meter	ng/m^2	ng/m2
Massive Distance Unit	Gram meter	Gram Meter	g.m
Massive Distance Unit	Gram meter per heartbeat	Gram Meter/Heartbeat	g.m/{hb}
Massive Distance Unit	Gram meter per heartbeat per square meter	Gram Meter/Heartbeat/ m^2	g.m/({hb}.m2)
Molar Mass Unit	Kilograms per mole	kg/mol	kg/mol
Number Concentration Units	Per microliter	/uL	/uL
Number Concentration Units	Cells per microliter	cells/uL	{Cells}/uL
Number Concentration Units	Red blood cells per microliter	RBC/mm^3	{rbc}/uL
Number Concentration Units	Thousands per microliter	10^3/uL	10*3/uL
Number Concentration Units	Millions per microliter	10^6/uL	10*6/uL

Number Concentration Units	Billions per microliter	10^9/uL	10*9/uL
Number Concentration Units	Per milliliter	/mL	/mL
Number Concentration Units	Spermatozoa per milliliter	Sperm/mL	{Spermatozoa}/mL
Number Concentration Units	Copies per milliliter	Copies/mL	{Copies}/mL
Number Concentration Units	Thousand per milliliter	10^3/mL	10*3/mL
Number Concentration Units	Thousand copies per milliliter	10^3 copies/mL	10*3{Copies}/mL
Number Concentration Units	Million per milliliter	10^6/mL	10*6/mL
Number Concentration Units	Billions per milliliter	10^9/mL	10*9/mL
Number Concentration Units	Colony forming units per milliliter	cfu/mL	{cfu}/mL
Number Concentration Units	Per deciliter	/dL	/dL
Number Concentration Units	Thousand per liter	10^3/L	10*3/L
Number Concentration Units	Million per liter	10^6/L	10*6/L
Number Concentration Units	Trillion per liter	10^12/L	10*12/L
Number Concentration Units	Billion per liter	10^9/L	10*9/L
Mass Concentration Unit	Picograms per millileter	pg/mL	pg/mL
Mass Concentration Unit	Nanograms per millileter	ng/mL	ng/mL
Mass Concentration Unit	Nanograms per millileter red blood cells	ng/mL RBCs	ng/mL{rbc}
Mass Concentration Unit	Micrograms per milliliter	ug/mL	ug/mL
Mass Concentration Unit	Grams per millileter	g/mL	g/mL
Mass Concentration Unit	Picograms per deciliter	pg/dL	pg/dL
Mass Concentration Unit	Nanograms per deciliter	ng/dL	ng/dL
Mass Concentration Unit	Micrograms per deciliter	ug/dL	ug/dL
Mass Concentration Unit	Micrograms per deciliter red blood cells	ug/dL RBCs	ug/dL{rbc}
Mass Concentration Unit	Milligrams per deciliter	mg/dL	mg/dL
Mass Concentration Unit	Milligrams Phenylketones per deciliter	mg Phe/dL	mg{Phenylketones} /dL
Mass Concentration Unit	Grams per deciliter	g/dL	g/dL
Mass Concentration Unit	Nanograms per liter	ng/L	ng/L
Mass Concentration Unit	Picograms per liter	pg/L	pg/L

Mass Concentration Unit	Micrograms per liter	ug/L	ug/L
Mass Concentration Unit	Milligrams per liter	mg/L	mg/L
Mass Concentration Unit	Grams per liter	g/L	g/L
Mass Concentration Unit	Kilograms per liter	kg/L	kg/L
Mass Concentration Unit	Milligrams per cubic meter	mg/m^3	mg/m3
Mass Concentration Unit	Kilograms per cubic meter	kg/m^3	kg/m3
Substance Concentration Unit	Femtomoles per milliliter	fmol/mL	fmol/mL
Substance Concentration Unit	Picomoles per milliliter	pmol/mL	pmol/mL
Substance Concentration Unit	Nanomoles per milliliter	nmol/mL	nmol/mL
Substance Concentration Unit	Micromoles per milliliter	umol/mL	umol/mL
Substance Concentration Unit	Moles per milliliter	mol/mL	mol/mL
Substance Concentration Unit	Picomoles per deciliter	pmol/dL	pmol/dL
Substance Concentration Unit	Nanomoles per deciliter	nmol/dL	nmol/dL
Substance Concentration Unit	Micromoles per deciliter	umol/dL	umol/dL
Substance Concentration Unit	Millimoles per deciliter	mmol/dL	mmol/dL
Substance Concentration Unit	Millimoles per liter	mmol/L	mmol/L
Substance Concentration Unit	Picomoles per liter	pmol/L	pmol/L
Substance Concentration Unit	Nanomoles per liter	nmol/L	nmol/L
Substance Concentration Unit	Micromoles per liter	umol/L	umol/L
Substance Concentration Unit	Moles per liter	mol/L	mol/L
Substance Concentration Unit	Moles per cubic meter	mol/m^3	mol/m3
Substance Concentration Unit	Microequivalents per milliliter	ueg/mL	ueq/mL
Substance Concentration Unit	Milliequivalent per milliliter	meg/mL	meq/mL
Substance Concentration Unit	Equivalents per liter	eg/L	eq/L
Substance Concentration Unit	Milliosmoles per liter	mOsm/L	mosm/L
Substance Concentration Unit	Osmoles per liter	Osm/L	osm/L

Arbitrary Concentration Units	Microinternational Units per milliliter	uIU/mL	u[iU]/mL
Arbitrary Concentration Units	Milliinternational Units per milliliter	mIU/mL	m[iU]/mL
Arbitrary Concentration Units	Ig G Phospholipid Units per milliliter	IgG Phospholipid U/mL	{IgGPhospholipid}U/mL
Arbitrary Concentration Units	Ig MP Phospholipid Units per milliliter	IgM Phospholipid U/mL	{IgMPhospholipid}U/mL
Arbitrary Concentration Units	Complement Ch 50 Units per milliliter	CH50 U/mL	{ComplementCh50}U/mL
Arbitrary Concentration Units	Ig A Phospholipid Units per milliliter	IgA Phospholipid U/mL	{IgAPhospholipid}U/mL
Arbitrary Concentration Units	Elisa Units per milliliter	Elisa U/mL	{Elisa_U}/mL
Arbitrary Concentration Units	International Units per milliliter	IU/mL	[iU]/mL
Arbitrary Concentration Units	Kilointernataional units per milliliter	kIU/mL	k[iU]/mL
Arbitrary Concentration Units	International Units per deciliter	IU/dL	[iU]/dL
Arbitrary Concentration Units	Ehrlich Units per deciliter	EU/dL	{Ehrlich_U}/dL
Arbitrary Concentration Units	Milliinternational units per liter	mIU/L	m[iU]/L
Arbitrary Concentration Units	International Units per liter	IU/L	[iU]/L
pH	pH	pH	[pH]
Unity	Log10	log 10	[lg]
Unity	Million per specimen	x10^6/spec	10*6/{Specimen}
Unity	Per total count	/Total	/{tot}
Unity	Thousand	x10^3	10*3
Unity	Thousand Red Blood Cells	x10^3 RBCs	10*3.{RBC}
Unity	One hundred thousand	x10^5	10*5
Unity	Million	x10^6	10*6
Unity	Ten to Eighth	x10^8	10*8
Length	Inch	in	[in_i]
Length	Feet	ft	[ft_i]
Length	Yard	yd	[yd_i]
Length	Femtometer	fm	fm
Length	Picometer	pm	pm
Length	Nanometer	nm	nm

Length	Micrometer	um	um
Length	Millimeter	mm	mm
Length	Cenimeter	cm	cm
Length	Decimeter	dm	dm
Length	Meter	m	m
Length	Kilometer	km	km
Heart Rate	Beats per minute	bpm	
Respiratory Rate	Breaths per minute	bpm	
Enyzyme Activity	Katal	kat	
Cell count	Cells per cubic millimeter	c/mm	
Concentration	Milligrams per kilograms of body mass	mg/kg	
Cell Count	Cells (thousands)/cubic millimeter	K/uL or K/mm3	
Bandwidth	Hertz per pixel	Hz/Pixel	