

# 1 Sample

## 1.1 Bacteria

### 1.1.1 First Use

*Clostridium botulinum*, *Pseudomonas putida*, *Clostridium perfringens*, *Bacillus subtilis*, *Clostridium tetani*, *Planifilum composti*, *Planifilum fimeticola*, *Coxiella burnetii*, *Rickettsia australis*, *Rickettsia rickettsii*.

### 1.1.2 Next Use

*C. botulinum*, *P. putida*, *C. perfringens*, *B. subtilis*, *C. tetani*, *P. composti*, *P. fimeticola*, *C. burnetii*, *R. australis*, *R. rickettsii*.

## 1.2 Markup Languages

### 1.2.1 First Use

L<sup>A</sup>T<sub>E</sub>X, markdown, extensible hypertext markup language (XHTML), mathematical markup language (MathML), scalable vector graphics (SVG).

### 1.2.2 Next Use

L<sup>A</sup>T<sub>E</sub>X, markdown, XHTML, MathML, SVG.

## 1.3 Vegetables

cabbage, Brussels sprout, artichoke, cauliflower, courgette, spinach.

## 1.4 Minerals

Beryl, amethyst, chalcedony, aquamarine, aragonite, calcite, bñlinite, cyanotrichite, biotite, dolomite, quetzalcoatlite, vulcanite.

## 1.5 Animals

Duck, parrot, hedgehog, sea lion.

## 1.6 Chemicals

$\text{Al}_2(\text{SO}_4)_3$ ,  $\text{H}_2\text{O}$ ,  $\text{C}_6\text{H}_{12}\text{O}_6$ ,  $\text{CH}_3\text{CH}_2\text{OH}$ ,  $\text{CH}_2\text{O}$ ,  $\text{OF}_2$ ,  $\text{O}_2\text{F}_2$ ,  $\text{SO}_4^{2-}$ ,  $\text{H}_3\text{O}^+$ ,  $\text{OH}^-$ ,  $\text{O}_2$ ,  $\text{AlF}_3$ ,  $\text{O}$ ,  $\text{Al}_2\text{CoO}_4$ ,  $\text{As}_4\text{S}_4$ ,  $\text{C}_{10}\text{H}_{10}\text{O}_4$ ,  $\text{C}_5\text{H}_4\text{NCOOH}$ ,  $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ ,  $\text{SO}_2$ ,  $\text{S}_2\text{O}_7^{2-}$ ,  $\text{SbBr}_3$ ,  $\text{Sc}_2\text{O}_3$ ,  $\text{Zr}_3(\text{PO}_4)_4$ ,  $\text{ZnF}_2$ .

## 1.7 SI Units

Base: A, kg, m, s, K, mol, cd. Derived:  $\text{m}^2$ ,  $\text{m}^3$ ,  $\text{m s}^{-1}$ ,  $\text{m s}^{-2}$ ,  $\text{A m}^{-2}$ ,  $\text{cd m}^{-2}$ ,  $\text{m}^3 \text{kg}^{-1}$ ,  $\text{mol m}^{-3}$ ,  $\text{m}^{-1}$ .

# Glossaries

## Bacteria

*B. subtilis* *Bacillus subtilis*.

*C. botulinum* *Clostridium botulinum*.

*C. burnetii* *Coxiella burnetii*.

*C. perfringens* *Clostridium perfringens*.

*C. tetani* *Clostridium tetani*.

*P. composti* *Planifilum composti*.

*P. fimeticola* *Planifilum fimeticola*.

*P. putida* *Pseudomonas putida*.

*R. australis* *Rickettsia australis*.

*R. rickettsii* *Rickettsia rickettsii*.

## Markup Languages

### HTML (hypertext markup language)

The standard markup language for creating web pages.

### LaTeX

A format of TeX designed to separate content from style.

### markdown

A lightweight markup language with plain text formatting syntax.

### MathML (mathematical markup language)

The standard markup language for creating web pages.

### SVG (scalable vector graphics)

XML-based vector image format.

### TeX

A format for describing complex type and page layout often used for mathematics, technical, and academic publications.

### XHTML (extensible hypertext markup language)

XML version of HTML.

### XML (extensible markup language)

A markup language that defines a set of rules for encoding documents.

## Vegetables

**artichoke** a variety of thistle cultivated as food.

**Brussels sprout** small leafy green vegetable buds.

**cabbage** vegetable with thick green or purple leaves.

**cauliflower** type of cabbage with edible white flower head.

**courgette** immature fruit of a vegetable **marrow**.

**marrow** long white-fleshed gourd with green skin.

**spinach** green, leafy vegetable.

## Minerals

### A

**amethyst** purple variety of **quartz**.

**aquamarine** light blue variety of **beryl**.

**aragonite** a crystal form of calcium carbonate.

### B

**beryl** composed of beryllium aluminium cyclosilicate.

**bilinite** an iron sulfate mineral.

**biotite** a common phyllosilicate mineral.

### C

**calcite** a crystal form of calcium carbonate.

**chalcedony** cryptocrystalline variety of **quartz**.

**cyanotrichite** a hydrous copper aluminium sulfate mineral.

### D

**dolomite** an anhydrous carbonate mineral.

### Q

**quartz** hard mineral consisting of silica.

**quetzalcoatlite** a rare tellurium oxysalt mineral.

### V

**vulcanite** a rare copper telluride mineral.

## Animals

**duck** a waterbird with webbed feet.

**hedgehog** small nocturnal mammal with a spiny coat and short legs.

**parrot** mainly tropical bird with bright plumage.

**sea lion** a large type of **seal**.

**seal** sea-dwelling fish-eating mammal with flippers.

## Chemical Formula

### A

$\text{Al}_2(\text{SO}_4)_3$	aluminium sulfate.
$\text{Al}_2\text{CoO}_4$	cobalt blue.
$\text{AlF}_3$	aluminium trifluoride.
$\text{As}_4\text{S}_4$	tetraarsenic tetrasulfide.

### C

$\text{CH}_2\text{O}$	formaldehyde.
$\text{CH}_3\text{CH}_2\text{OH}$	ethanol.
$\text{C}_5\text{H}_4\text{NCOOH}$	niacin.
$\text{C}_6\text{H}_{12}\text{O}_6$	glucose.
$\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$	caffeine.
$\text{C}_{10}\text{H}_{10}\text{O}_4$	ferulic acid.

### H

$\text{H}_2\text{O}$	water.
$\text{H}_3\text{O}^+$	hydronium.

### O

$\text{O}$	oxygen.
$\text{OF}_2$	oxygen difluoride.
$\text{OH}^-$	hydroxide ion.
$\text{O}_2$	dioxygen.
$\text{O}_2\text{F}_2$	dioxygen difluoride.

### S

$\text{SO}_2$	sulfur dioxide.
$\text{SO}_4^{2-}$	sulfate.
$\text{S}_2\text{O}_7^{2-}$	disulfate ion.
$\text{SbBr}_3$	antimony(III) bromide.
$\text{Sc}_2\text{O}_3$	scandium oxide.

### Z

$\text{ZnF}_2$	zinc fluoride.
$\text{Zr}_3(\text{PO}_4)_4$	zirconium phosphate.

## SI Units

A (ampere) electric current.

cd (candela) luminous intensity.

K (kelvin) thermodynamic temperature.

kg (kilogram) mass.

m (metre) length.

mol (mole) amount of substance.

s (second) time.

## Derived Units

$\text{A m}^{-2}$  (ampere per square metre) density.

$\text{cd m}^{-2}$  (candela per square metre) luminance.

$\text{m s}^{-2}$  (metre per second squared) acceleration.

$\text{m s}^{-1}$  (metre per second) velocity.

$\text{m}^{-1}$  (per metre) wave number.

$\text{m}^2$  (square metre) area.

$\text{m}^3$  (cubic metre) volume.

$\text{m}^3 \text{kg}^{-1}$  (cubic metre per kilogram) specific volume.

$\text{mol m}^{-3}$  (mole per cubic metre) concentration.

# Index

## A

aluminium sulfate,  $\text{Al}_2(\text{SO}_4)_3$ , 2, 5  
aluminium trifluoride,  $\text{AlF}_3$ , 2, 5  
amethyst, 1, 4  
ampere (A), 2, 5  
ampere per square metre ( $\text{A m}^{-2}$ ), 2, 6  
antimony(III) bromide,  $\text{SbBr}_3$ , 2, 5  
aquamarine, 1, 4  
aragonite, 1, 4  
artichoke, 1, 4

## B

*Bacillus subtilis*, 1, 3  
beryl, 1, 4  
bálinite, 1, 4  
biotite, 1, 4  
Brussels sprout, 1, 4

## C

cabbage, 1, 4  
caffeine,  $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ , 2, 5  
calcite, 1, 4  
candela (cd), 2, 5  
candela per square metre ( $\text{cd m}^{-2}$ ), 2, 6  
cauliflower, 1, 4  
chalcedony, 1, 4  
*Clostridium botulinum*, 1, 3  
*Clostridium perfringens*, 1, 3  
*Clostridium tetani*, 1, 3  
cobalt blue,  $\text{Al}_2\text{CoO}_4$ , 2, 5  
courgette, 1, 4  
*Coxiella burnetii*, 1, 3  
cubic metre ( $\text{m}^3$ ), 2, 6  
cubic metre per kilogram ( $\text{m}^3 \text{kg}^{-1}$ ), 2, 6  
cyanotrichite, 1, 4

## D

dioxygen,  $\text{O}_2$ , 2, 5  
dioxygen difluoride,  $\text{O}_2\text{F}_2$ , 2, 5  
disulfate ion,  $\text{S}_2\text{O}_7^{2-}$ , 2, 5  
dolomite, 1, 4  
duck, 1, 5

## E

ethanol,  $\text{CH}_3\text{CH}_2\text{OH}$ , 2, 5  
extensible hypertext markup language  
(XHTML), 1, 3  
extensible markup language (XML), 3

## F

ferulic acid,  $\text{C}_{10}\text{H}_{10}\text{O}_4$ , 2, 5  
formaldehyde,  $\text{CH}_2\text{O}$ , 2, 5

## G

glucose,  $\text{C}_6\text{H}_{12}\text{O}_6$ , 2, 5

## H

hedgehog, 1, 5  
hydronium,  $\text{H}_3\text{O}^+$ , 2, 5  
hydroxide ion,  $\text{OH}^-$ , 2, 5  
hypertext markup language (HTML), 3

## K

kelvin (K), 2, 5  
kilogram (kg), 2, 5

## L

L<sup>A</sup>T<sub>E</sub>X, 1, 3  
lettsomite, *see* cyanotrichite

## M

markdown, 1, 3

marrow, [4](#)  
 mathematical markup language  
     (MathML), [1](#), [3](#)  
 metre (m), [2](#), [5](#)  
 metre per second ( $\text{m s}^{-1}$ ), [2](#), [6](#)  
 metre per second squared ( $\text{m s}^{-2}$ ), [2](#), [6](#)  
 mole (mol), [2](#), [6](#)  
 mole per cubic metre ( $\text{mol m}^{-3}$ ), [2](#), [6](#)

## N

niacin,  $\text{C}_5\text{H}_4\text{NCOOH}$ , [2](#), [5](#)

## O

oxygen, O, [2](#), [5](#)  
 oxygen difluoride,  $\text{OF}_2$ , [2](#), [5](#)

## P

parrot, [1](#), [5](#)  
 per metre ( $\text{m}^{-1}$ ), [2](#), [6](#)  
*Planifilum composti*, [1](#), [3](#)  
*Planifilum fimeticola*, [1](#), [3](#)  
*Pseudomonas putida*, [1](#), [3](#)

## Q

quartz, [4](#)  
 quetzalcoatlite, [1](#), [4](#)

## R

*Rickettsia australis*, [1](#), [3](#)

*Rickettsia rickettsii*, [1](#), [3](#)

## S

scalable vector graphics (SVG), [1](#), [3](#)  
 scandium oxide,  $\text{Sc}_2\text{O}_3$ , [2](#), [5](#)  
 sea lion, [1](#), [5](#)  
 seal, [5](#)  
 second (s), [2](#), [6](#)  
 spinach, [1](#), [4](#)  
 square metre ( $\text{m}^2$ ), [2](#), [6](#)  
 sulfate,  $\text{SO}_4^{2-}$ , [2](#), [5](#)  
 sulfur dioxide,  $\text{SO}_2$ , [2](#), [5](#)

## T

tetraarsenic tetrasulfide,  $\text{As}_4\text{S}_4$ , [2](#), [5](#)  
 T<sub>E</sub>X, [3](#)

## V

vulcanite, [1](#), [4](#)

## W

water,  $\text{H}_2\text{O}$ , [2](#), [5](#)

## Z

zinc fluoride,  $\text{ZnF}_2$ , [2](#), [5](#)  
 zirconium phosphate,  $\text{Zr}_3(\text{PO}_4)_4$ , [2](#), [5](#)  
 zucchini, *see* [courgette](#)