

# HACKH'S CHEMICAL DICTIONARY

[*American and British Usage*]

*Containing the Words Generally Used in Chemistry,  
and Many of the Terms Used in the Related  
Sciences of Physics, Astrophysics, Mineralogy,  
Pharmacy, Agriculture, Biology,  
Medicine, Engineering, etc.*

*Based on Recent Chemical Literature*

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sand, used for fumigation by dropping  
ochloric acid to liberate hydrogen  
dispersion of a solid phase in a gaseous  
like.  
ce layer of the earth; the weathered  
rock fragments with decomposed  
animal matter. 1,000 million hec-  
of the world are used for agriculture.

SOILS

Sand	Clay	Type
30-100	0	Flying sand
	10	Loose sand
	20	Clay sand
10-50	30	Sandy loam
	40	Mild loam
	55	Strong loam
0-30	65	Mild clay
	75	common clay
	90	Strong clay
5-50	20-50	Loamy soil
.....	.....	Sandy soil
.....	.....	Calcareous soil
.....	.....	Lime soil
Particles, mm diameter		
.....	Over 2	.....
.....	0.2-2.0	.....
.....	0.02-0.20	.....
.....	0.002-0.02	.....
.....	Below 0.002	.....

7. See table. **s. amendment.** A  
o s. to improve it other than by  
e.g., sand added to prevent  
v. **s. bacteria.** Protozoa that  
the ammonification and nitrifica-  
compounds, e.g., *Bacillus mycoides*.  
**s. horizon.** Layers of a  
have become differentiated as a  
s occurring in the s. mass. **s.**  
**s. mechanics.** **s. profile.** A section  
e layers produced at different  
gical or other causes. Cf. **s.**  
e. **Pedology.** The study of the  
r.  
solution. (2) The liquid phase of  
1. (3) Abbreviation for soluble.  
ystem in which the surrounding  
fog. **collo-** Colloidal. **electro-**  
A colloidal suspension in a  
See **gel.** **sulfo-** See **sulfosol.**  
ade family. Herbs or shrubs  
often poisonous foliage, and a  
staining alkaloids; e.g., roots:  
2, atropine; leaves: *Datura*

*stramonium*, stramonium; branches: *Fabiana imbricata*, pichi; fruits: *Capsicum frutescens*, cayenne pepper. **S. alkaloids.** The alkaloids obtained from various species of s.; as: atropine, hyoscyamine, belladonine. Cf. *lycine*, *solandrine*, *solanine*.  
**solandrine.** An alkaloid from *Solandra lavis*. It resembles hyoscyne.  
**solanellie acid.** C<sub>23</sub>H<sub>34</sub>O<sub>12</sub> = 502.2. A hexabasic acid from oxidation of bile acids.  
**solanisol.** A long-chain isoprenoid alcohol from tobacco.  
**solanidine** C<sub>27</sub>H<sub>43</sub>O<sub>3</sub>N = 397.4. A decomposition product of solanine. Colorless crystals, m.208, soluble in alcohol.  
**solanin.** C<sub>45</sub>H<sub>73</sub>O<sub>15</sub>N = 867.7. A glycoside from *Solanum nigrum*, potato and other species. Colorless microcrystals, m.230, soluble in water; a nerve sedative.  
**solanine.** C<sub>52</sub>H<sub>91</sub>O<sub>18</sub>N = 1017.7. An alkaloid in Solanaceae, decomp. 254. Potato s. can cause poisoning.  
**solanorubin.** Licopene.  
**Solanum.** Herbs and shrubs of the family Solanaceae; includes nightshades and potatoes. **S. carolinense.** Solanum, horse nettle, poison potato, sand brier, bull nettle. Air-dry ripe fruits (Southern States); a sedative. **S. dulcamara.** Bittersweet. **S. grandiflora.** S. yielding grandiflorine, q.v. **S. insidiosum.** Jurubeba. The root (Brazil) is a stomachic and diuretic. **S. melongena.** Eggplant. **S. nigrum.** The common garden nightshade. **S. tomatillo.** S. yielding natrine, q.v. **S. tuberosum.** The common potato.  
**solapson(e).** C<sub>30</sub>H<sub>28</sub>O<sub>14</sub>N<sub>2</sub>S<sub>5</sub>Na<sub>4</sub> = 892.93. Sulfetronone. White, amorphous powder, soluble in water; a bacteriostatic (B.P.).  
**solar.** Pertaining to the sun. **s. constant.** 1.932 small calories: the amount of s. energy falling at normal incidence per square centimeter per minute on a body at the earth's mean distance from the sun. **s. pan, s. pond.** Flat areas surrounded by low dykes in which seawater is evaporated for salt. **s. radiation.** See **radiation.** **s. rays.** The visible and invisible radiations of the sun. **s. salt.** See **salt.** **s. spectrum.** The spectrum produced when sunlight is refracted by a prism or grating; characterized by Fraunhofer lines. **s. year.** The ordinary year.  
**solargentum.** A compound of silver and gelatin. Black granules; used medicinally.  
**solarization.** (1) Exposure to the sun; as in accelerated aging. Cf. **irradiation.** (2) A decrease in starch content following long exposure of plant leaves to light. (3) The partial inversion of a photographic negative into a positive by exposure to light during development; used to enhance shading effects.  
**solate.** A liquefied gel.  
**solation.** Liquefaction of a gel; the reverse of gelation.  
**solbrol.** Nipagin.  
**solder.** Braze. A fusing metal or alloy used to unite adjacent surfaces of less fusible metals. **brass-** Copper s. **copper-** An alloy: Sn 5, Pb 2 pts., with zinc chloride as flux. **fine-** Soft s. **fusible-** An alloy of Pb, Sn, and Bi, which melts in water; used in fire-spray extinguishers. **gold-** An alloy:

Au 10, Ag 6, Cu 4 pts. **hard-** A high-melting-point alloy used as s.; it fuses at red heat: e.g., Cu + Zn + Ag. **lead-** An alloy of equal parts of Pb and Sn, used for soldering lead. **plumber's-** An alloy usually containing approx. Pb 65, Sn 30%, with some Sb. **seifert-** A s. for aluminum, containing Sn 73, Zn 21, Pb 5%. **silver-** See **silver.** **soft-** A s. that fuses below red heat; as, Sn + Pb: **lead s., fusible s.** **zinc-** An alloy: Sn 5, Pb 3 pts.  
**soldering.** (1) Uniting metallic pieces by heat with or without an alloy (solder) and flux (borax). (2) In commerce, soft (as distinct from hard) solders. S. differs from **brazing** and **fusion welding**, q.v. **autogenous-** Uniting metal surfaces by interdiffusion, without a more fusible alloy. **fusing-** uniting metal surfaces by filling all intervening space with a completely fused solder. **sweating-** S. in which the solder is heated near its melting point and adheres.  
**solenhofen stone.** A fine-grained, porous limestone; contains clay.  
**solenoid.** Selenoid. A hollow cylinder, wound with resistance wire, used to produce fields of electric force.  
**solfatara.** A volcanic vent from which sulfur is obtained.  
**solferino.** Fuchsin.  
**solid.** (1) A substance of definite shape, and relatively great density, low internal heat content, and great cohesion of its molecules. It may be homogeneous (as crystals and solid solutions); or heterogeneous (as amorphous and colloidal substances). **s. solution.** (1) Sosoloid. **A homogeneous, s. mixture of substance;** as, glass. (2) A s. solution of a solid, liquid, or gas in a solid.  
**solidago.** Goldenrod. The dried herb of *Solidago odora* (Compositae); a diaphoretic, stimulant, carminative, and diuretic.  
**solidify.** To change into the solid state.  
**solidifying point.** Freezing point.  
**solidus.** In a temperature-concentration diagram for both solid and liquid solutions whose concentrations differ, the s. curve relates to the solid phase and the **liquidus** to the liquid phase. Cf. **diagram.**  
**soliquid.** Suspension. A dispersed system of a solid phase in a liquid phase.  
**soln.** Abbreviation for solution.  
**solodization.** Dealkalization. Removal of alkali from soils by degradation.  
**Solomon's seal.** Polygonatum. The dried herb of *Polygonatum officinale* (Liliaceae); an astringent and antirheumatic.  
**Solozone.** Trademark for a brand of hydrogen peroxide.  
**solubility.** The extent to which a substance (solute) mixes with a liquid (solvent) to produce a homogeneous system (solution). **apparent-** The total amount of the nonionized and ionized portions of a substance dissolved in a liquid. **degree of-** The concentration of a saturated solution at a given temperature. S. generally increases with increase in temperature. **molar-**  $s/M$ , where  $s$  is the number of grams per liter, and  $M$  the molecular weight. **real-** The amount of nonionized solute in a liquid.  
**s. curve.** A graph obtained by plotting the amount of dissolved substance in a saturated solution against the temperature. **s. exponent.**