

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
phase.

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 10 20	Flying sand Loose sand Clay sand
10-50	30 40 55	Sandy loam Mild loam Strong loam
0-30	65 75 90	Mild clay common clay Strong clay
5-50	20-50	Loamy soil
1-25	50-75	Clayey soil
1-80	Sandy soil
little	Calcareous soil
little	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.** Protophyta that
the ammonification and nitrifica-
compounds, e.g., *Bacillus mycoides*.
robacter. **s. horizon.** Layers of a
have become differentiated as a
as occurring in the s. mass. **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
o. (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, belladonnine. Cf. *lycine*, *solandrine*, *solanine*.

solandrine. An alkaloid from *Solandra lavis*. It resembles hyoscyamine.

solanellic acid. $C_{23}H_{34}O_{12} = 502.2$. A hexabasic acid from oxidation of bile acids.

solanesol. A long-chain isoprenoid alcohol from tobacco.

solandine $C_{27}H_{43}O_3N = 397.4$. A decomposition product of solanine. Colorless crystals, m.208, soluble in alcohol.

solanine. $C_{45}H_{73}O_{15}N = 867.7$. A glycoside from *Solanum nigrum*, potato and other species. Colorless microcrystals, m.280, soluble in water; a nerve sedative.

solanine. $C_{52}H_{81}O_{18}N = 1017.7$. 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.** Bitter-sweet. **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). $C_{36}H_{28}O_{14}N_2S_5Na_4 = 892.93$. 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 interfusion, 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) Sosoiloid. **A homo-** **geneous, 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.**