>>**Entry Name: Sodium chloride (NaCl),** 8Cl, JAN, USAN
Synonym(s): Rock salt. Salt. Halite. Ayr. Hypersal. Brine. Natritope chloride

CAS Registry Number: 7647-14-5
Related CAS Registry Numbers(s): 17112-21-9
Extra CAS Registry Numbers(s): 14762-51-7

NaCl

Molecular Formula: ClNa
Molecular Weight: 58.442
Accurate Mass: 57.958619
Percentage Composition: Cl 60.66%; Na 39.34%

Source/Synthesis: Mineral. Manufactured from salt deposits by conventional extraction methods
Use/Importance: Commercially available. Pharmaceutic aid (tonicity agent). Tablet and capsule diluent. Used in fluxes, electroplating and as a food additive. Raw material for the production of many commercially significant sodium salts. Also used in the preparation of sodium metal
Physical Description: Colourless cubic cryst., hygroscopic
Melting Point: Mp 801°
Boiling Point: Bp 1413°
Solubility: V. sol H_2O (36 g per 100 cm^3 at 0°; 39 g per 100 cm^3 at 100°); spar. sol. EtOH
Other Data: ^{22}Na labelled compd. used as radioactive agent (Sodium chloride Na 22, USAN). Component of Lytears. ΔH_f° –411.1 kJ mol^{-1}; ΔG_f° –384.0 kJ mol^{-1}; S° 72.1 J K^{-1} mol^{-1}
Hazard & Toxicity: Adverse therapeutic effects include hypertension, oedema, and gastrointestinal disturbances. Excessive administration can lead to hypernatraemia with resultant dehydration of internal organs

Aldrich: 31879-5
Fluka: 24889
Sigma: W3504

References:

Nickels, J.E. *et al.*, *J. Phys., Colloq.*, 1949, **53**, 625
Kaufmann, D.W.*, Sodium Chloride*, ACS Monograph Ser. 145, Reinhold, NY, 1960, *(rev)*
Gmelin Handbook Inorg. Chem., *Syst. No.* 21, 1964, **1**, 126, *(rev, bibl)*
Krishnamurthy, N. *et al.*, *Z. Phys.*, 1965, **183**, 130, *(Raman)*
Clough, R.W.*, Handb. Ind. Chem.*, 1974, 123, *(rev, uses)*
Lowenheim, F.A. *et al.*, *Industrial Chemicals*, (Eds.), 4th Ed., Wiley-Interscience, N.Y., 1975, 722, *(manuf)*
Heiss, J.F. *et al.*, *Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley*, 1978, **21**, 205, *(rev)*
Kare, M.R. *et al.*, *Biol. Behav. Aspects Salt Intake, [Int. Conf.], 1979*, Academic Press, New York, 1980, *(book)*
Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 770, *(thermochem data)*
Tabeta, R. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, 1986, **59**, 1957, *(Na-23 nmr)*
Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 3135d, *(haz)*
Handbook of Pharmaceutical Excipients, 2nd edn., (eds. Wade, A. *et al*), American Pharmaceutical Association/Pharmaceutical Press, 1994, 439-442
Martindale, The Extra Pharmacopoeia, 31st edn., Pharmaceutical Press, 1996, 1184
Lewis, R.J.*, Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold*, 1992, SFT000