



>>Entry Name: Sodium methanesulfonate

Synonym(s): Methanesulfonic acid sodium salt, 8Cl

CAS Registry Number: 2386-57-4

MeSO₃Na

Molecular Formula: CH₃NaO₃S

Molecular Weight: 118.089

Accurate Mass: 117.970057

Percentage Composition: C 10.17%; H 2.56%; Na 19.47%; O 40.65%; S 27.15%

Source/Synthesis: Obt. by neutralisation of MeSO₃H with NaOEt in EtOH

Use/Importance: Commercially available

Physical Description: Hygroscopic colourless orthorhombic needles (EtOH aq.)

Other Data: Oxidn. of an anhyd. MeSO₃H soln. of MeSO₃Na gives (MeSO₂O)₂

Aldrich: 30450-6

Fluka: 64293

Rare Chemicals Library: S63172-8

>>Derivative: Dihydrate

Molecular Formula: CH₇NaO₅S

Molecular Weight: 154.119

Accurate Mass: 153.991187

Percentage Composition: C 7.79%; H 4.58%; Na 14.92%; O 51.91%; S 20.81%

Physical Description: Hygroscopic prisms

Melting Point: Mp 64°

Solubility: Sol. EtOH, alkalis

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **1**, 1427A, (*nmr*)

Charbonnier, F., *Ann. Chim. (Paris)*, 1971, **6**, 405, (*synth, thermal dec*)

Thompson, W.K., *Spectrochim. Acta A*, 1972, **28**, 1479, (*ir, Raman*)

Myall, C.J. *et al.*, *J.C.S. Perkin 1*, 1975, 953, (*oxidn*)

Kosugi, Y. *et al.*, *Org. Magn. Reson.*, 1979, **12**, 435, (*cmr*)

Wei, C.H. *et al.*, *Acta Cryst. B*, 1981, **37**, 1992, (*cryst struct*)

Ratcliffe, C.I. *et al.*, *J.C.S. Faraday 2*, 1982, **78**, 1881, (*inelastic neutron scattering*)

Tamaki, K. *et al.*, *Bull. Chem. Soc. Jpn.*, 1983, **56**, 1930, (*aq soln props*)

Cassidei, L. *et al.*, *J. Magn. Reson.*, 1985, **62**, 529, (*S-33 nmr*)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 2229c, (*haz*)