



>>Entry Name: Dimethylmercury

Synonym(s): Mercury dimethyl

CAS Registry Number: 593-74-8

Related CAS Registry Numbers(s): 22967-92-6

Extra CAS Registry Numbers(s): 16056-34-1

Type of Compound Code(s): BB0390 BB0710

HgMe₂

Molecular Formula: C₂H₆Hg

Molecular Weight: 230.659

Accurate Mass: 232.017567

Percentage Composition: C 10.41%; H 2.62%; Hg 86.96%

Source/Synthesis: Synth. from MeHgI and HgCl₂

Use/Importance: Carbometallates alkenes with strong electron-withdrawing groups; alkylates [Ph₃C]ClO₄. Nmr standard for Hg. Use discouraged owing to extreme toxicity

Physical Description: Liq. with faint sweet odour

Boiling Point: Bp₇₆₁ 92°

Density: d₄²⁰ 2.96

Refractive Index: n_D²⁰ 1.5413

Other Data: Dipole moment 0.69D (C₆H₆)

Hazard & Toxicity: Extremely toxic. Has caused human fatality by skin absorption of small amounts. Penetrates rubber gloves

Aldrich: 32808-1

Fluka: 41569

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **3**, 737C, (nmr)

Gilman, H. *et al.*, *J.A.C.S.*, 1930, **52**, 3314, (synth)

Mel'nikov, N.N., *J. Gen. Chem. USSR (Engl. Transl.)*, 1946, **16**, 2065; *CA*, **42**, 877, (synth)

Ol'dekop, Y.A. *et al.*, *J. Gen. Chem. USSR (Engl. Transl.)*, 1969, **39**, 650, (synth)

Barbieri, G. *et al.*, *J.C.S. Perkin 2*, 1972, 1323, (pmr)

Kashiwabawa, K. *et al.*, *Bull. Chem. Soc. Jpn.*, 1973, **46**, 407, (ed)

Sens, M.A. *et al.*, *J. Magn. Reson.*, 1975, **19**, 323, (Hg-199 nmr)

Brown, A.J. *et al.*, *J.C.S. Dalton*, 1976, 1589, (Hg-199 nmr)

Simonetti, L. *et al.*, *Inorg. Chim. Acta*, 1977, **21**, L27, (ms)

Butler, I.S. *et al.*, *Spectrochim. Acta A*, 1977, **33**, 669, (ir, Raman)

Creber, D.K. *et al.*, *Inorg. Chem.*, 1980, **19**, 643, (pe)

Irvine, S.J. *et al.*, *J. Electrochem. Soc.*, 1985, **132**, 968, (uv)

Wei, Y.C. *et al.*, *Magn. Reson. Chem.*, 1986, **24**, 659, (pmr)

Masucci, J.A. *et al.*, *Org. Mass Spectrom.*, 1987, **22**, 233, (ms)

Grishin, Yu.K. *et al.*, *Metalloorg. Khim.*, 1991, **4**, 1067, (cmr, pmr, Hg-199 nmr)

Blayney, M.B. *et al.*, *Chem. Eng. News*, May 12, 1997, 7, (tox)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1999, **5**, 211-212, (synth)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, DSM450