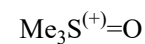




>>Entry Name: Trimethyloxosulfonium(1+)

Synonym(s): Trimethylsulfoxonium



Molecular Formula: C₃H₉OS⁽⁺⁾

Molecular Weight: 93.17

Accurate Mass: 93.03741

Percentage Composition: C 38.67%; H 9.74%; O 17.17%; S 34.42%

>>Derivative: Hydroxide

Synonym(s): Trimethyloxosulfonium hydroxide. TOSH

CAS Registry Number: 65150-70-1

Molecular Formula: C₃H₁₀O₂S

Molecular Weight: 110.177

Accurate Mass: 110.04015

Percentage Composition: C 32.70%; H 9.15%; O 29.04%; S 29.10%

Use/Importance: Reagent for *N*-methylation of pyrimidines and pyrimidine nucleosides

>>Derivative: Chloride

CAS Registry Number: 5034-06-0

Molecular Formula: C₃H₉ClOS

Molecular Weight: 128.622

Accurate Mass: 128.006262

Percentage Composition: C 28.01%; H 7.05%; Cl 27.56%; O 12.44%; S 24.93%

Physical Description: Needles (MeOH/C₆H₆)

Melting Point: Mp 220-222 dec.°

Boiling Point: Subl. 227°

Solubility: Sol. H₂O

Other Data: Hygroscopic

Hazard & Toxicity: Irritant

Aldrich: 29300-8

Fluka: 92761

>>Derivative: Iodide

CAS Registry Number: 1774-47-6

Molecular Formula: C₃H₉IOS

Molecular Weight: 220.074

Accurate Mass: 219.941883

Percentage Composition: C 16.37%; H 4.12%; I 57.66%; O 7.27%; S 14.57%

Melting Point: Mp 175°

Hazard & Toxicity: LD₅₀ (mus, ipr) 900 mg/kg

Aldrich: T8050-0

Fluka: 92763

References:

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Zimmermann, I.C. *et al.*, *Acta Cryst.*, 1963, **16**, 883-887, (*cryst struct, tetrafluoroborate*)

Corey, E.J. *et al.*, *J.A.C.S.*, 1965, **87**, 1353-1364, (*chloride*)

Yamanchi, K. *et al.*, *J.O.C.*, 1978, **43**, 1593-1595, (*synth, nmr, ir, ms*)

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Jannin, M. *et al.*, *Acta Cryst. C*, 1991, **47**, 1687-1689; 2228-2229; 2229-2230; 2231-2232; 2232-2234; 1993, **49**, 749-751; 1995, **50**, 1514-1516, (*cryst struct*)