



>>Entry Name: Trimethylsulfonium(1+), 9Cl, 8Cl

CAS Registry Number: 676-84-6

$\text{Me}_3\text{S}^{(+)}$

Molecular Formula: $\text{C}_3\text{H}_9\text{S}^{(+)}$

Molecular Weight: 77.17

Accurate Mass: 77.042495

Percentage Composition: C 46.69%; H 11.75%; S 41.55%

>>Derivative: Chloride

CAS Registry Number: 3086-29-1

Molecular Formula: $\text{C}_3\text{H}_9\text{ClS}$

Molecular Weight: 112.623

Accurate Mass: 112.011347

Percentage Composition: C 31.99%; H 8.05%; Cl 31.48%; S 28.47%

Physical Description: V. hygroscopic cryst.

Melting Point: Mp 100 dec.°

Solubility: V. sol. EtOH

>>Derivative: Bromide

CAS Registry Number: 3084-53-5

Molecular Formula: $\text{C}_3\text{H}_9\text{BrS}$

Molecular Weight: 157.074

Accurate Mass: 155.980831

Percentage Composition: C 22.94%; H 5.78%; Br 50.87%; S 20.41%

Physical Description: Cryst. (H_2O or EtOH)

Melting Point: Mp 172 dec.°. Mp 201-202 dec.° (sealed tube)

>>Derivative: Iodide

CAS Registry Number: 2181-42-2

Molecular Formula: $\text{C}_3\text{H}_9\text{IS}$

Molecular Weight: 204.075

Accurate Mass: 203.946968

Percentage Composition: C 17.66%; H 4.44%; I 62.19%; S 15.71%

Use/Importance: Used as a 5% aq. soln. for detn. of Bi; extraction separation of $\text{ClO}_4^{(-)}$, $\text{MnO}_4^{2(-)}$, $\text{ReO}_4^{(-)}$, $\text{Cr}_2\text{O}_7^{2(-)}$, $\text{I}^{(-)}$; amperometric titrimetric detn. of Bi, Hg

Physical Description: Cryst. (EtOH)

Melting Point: Mp 211-212.5 dec.°

Hazard & Toxicity: LD_{50} (mus, ivn) 18 mg/kg

Aldrich: T8048-9

Fluka: 92762

>>Derivative: Methosulfate

CAS Registry Number: 2181-44-4

Molecular Formula: $\text{C}_4\text{H}_{12}\text{O}_4\text{S}_2$

Molecular Weight: 188.268

Accurate Mass: 188.0177

Percentage Composition: C 25.52%; H 6.42%; O 33.99%; S 34.06%

Use/Importance: Reagent for phase-transfer epoxidation of aldehydes and ketones

Melting Point: Mp 92-94°

Aldrich: 30359-3

>>Derivative: Trifluoromethanesulfonate

Molecular Formula: $\text{C}_4\text{H}_9\text{F}_3\text{O}_3\text{S}_2$

Molecular Weight: 226.241

Accurate Mass: 225.994519

Percentage Composition: C 21.24%; H 4.01%; F 25.19%; O 21.22%; S 28.35%

Physical Description: Powder

References: