



>>Entry Name: Triethyloxonium(1+)

CAS Registry Number: 24935-24-8

Et₃O⁽⁺⁾

Molecular Formula: C₆H₁₅O⁽⁺⁾

Molecular Weight: 103.184

Accurate Mass: 103.11229

Percentage Composition: C 69.84%; H 14.65%; O 15.51%

>>Derivative: Tetrafluoroborate

Synonym(s): Triethyloxonium tetrafluoroborate, 9Cl. Triethyloxonium fluoroborate. Meerwein's reagent

CAS Registry Number: 368-39-8

Molecular Formula: C₆H₁₅BF₄O

Molecular Weight: 189.988

Accurate Mass: 190.115207

Percentage Composition: C 37.93%; H 7.96%; B 5.69%; F 40.00%; O 8.42%

Use/Importance: Powerful alkylating agent. Commercially available. Catalyst for polym. of epoxides

Physical Description: Hygroscopic cryst. (Et₂O)

Melting Point: Mp 91-92 dec.°

Solubility: Sol. CH₂Cl₂, sl. sol. Et₂O

Other Data: V. hygroscopic, light-sensitive

Aldrich: 39928-0

Fluka: 90520

>>Derivative: Hexafluorophosphate

CAS Registry Number: 17950-40-2

Molecular Formula: C₆H₁₅F₆OP

Molecular Weight: 248.148

Accurate Mass: 248.07647

Percentage Composition: C 29.04%; H 6.09%; F 45.94%; O 6.45%; P 12.48%

Physical Description: Cryst. (CH₂Cl₂/Et₂O)

Melting Point: Mp 142-143°

Aldrich: 16468-2

Fluka: 91651

>>Derivative: Hexachloroantimonate

CAS Registry Number: 3264-67-3

Molecular Formula: C₆H₁₅Cl₆OSb

Molecular Weight: 437.65

Accurate Mass: 433.829223

Percentage Composition: C 16.47%; H 3.45%; Cl 48.60%; O 3.66%; Sb 27.82%

Physical Description: Cryst. (1,2-dichloroethane)

Melting Point: Mp 131°. Mp 135-137° (dec.)

References:

Meerwein, H. *et al.*, *J. Prakt. Chem.*, 1937, **147**, 257, (*synth*)

Hilgetag, G. *et al.*, *Chem. Ber.*, 1963, **96**, 1446-1453; 1454-1464, (*hexachloroantimonate*)

Kabuss, S., *Angew. Chem., Int. Ed.*, 1966, **5**, 675-676, (*hexachloroantimonate*)

Org. Synth., 1966, **46**, 113, (*synth*)

Olah, G.A. *et al.*, *Synthesis*, 1973, 490, (*hexafluorophosphate*)

Jones, F.R. *et al.*, *J.C.S. Dalton*, 1979, 927, (*synth*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1980, **8**, 500

Olah, G.A. *et al.*, *J.A.C.S.*, 1982, **104**, 2365, (*cryst struct*)

Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **7**, 5105-5112, (*rev, use*)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1996, **1**, 71-22, (*tetrafluoroborate*)