



>>Entry Name: Tetrakis(hydroxymethyl)phosphonium(1+)

CAS Registry Number: 24655-84-3

Related CAS Registry Numbers(s): 512-82-3

$\text{P}(\text{CH}_2\text{OH})_4^{(+)}$

Molecular Formula: $\text{C}_4\text{H}_{12}\text{O}_4\text{P}^{(+)}$

Molecular Weight: 155.11

Accurate Mass: 155.047322

Percentage Composition: C 30.97%; H 7.80%; O 41.26%; P 19.97%

>>Derivative: Chloride

CAS Registry Number: 124-64-1

Molecular Formula: $\text{C}_4\text{H}_{12}\text{ClO}_4\text{P}$

Molecular Weight: 190.563

Accurate Mass: 190.016174

Percentage Composition: C 25.21%; H 6.35%; Cl 18.60%; O 33.58%; P 16.25%

Use/Importance: Flameproofing agent

Physical Description: Hygroscopic solid

Melting Point: Mp 151°

Solubility: Sol. H_2O , MeOH; insol. Et_2O

Hazard & Toxicity: LD₅₀ (mus, orl) 400 mg/kg. LD₅₀ (rat, orl) 282 mg/kg

Aldrich: 40486-1

Fluka: 87620

Rare Chemicals Library: S57439-2

Sigma: T9543

>>Derivative: Sulfate (2:1)

CAS Registry Number: 55566-30-8

Use/Importance: Fireproofing agent for textiles

>>Derivative: Acetate

CAS Registry Number: 7580-37-2

Molecular Formula: $\text{C}_6\text{H}_{15}\text{O}_6\text{P}$

Molecular Weight: 214.155

Accurate Mass: 214.060627

Percentage Composition: C 33.65%; H 7.06%; O 44.83%; P 14.46%

Use/Importance: Flameproofing agent

References:

Hoffman, A., *J.A.C.S.*, 1921, **43**, 1684, (*synth*)

Ger. Pat., 1970, 2 154 811; *CA*, **80**, 61008, (*use*)

Valetdinov, R.K. *et al.*, *CA*, 1971, **75**, 89084, (*synth*)

Ellzey, S.E. *et al.*, *Can. J. Chem.*, 1971, **49**, 3581, (*pmr*)

Ellzey, S.E., *Text. Chem. Color.*, 1978, **10**, 12; *CA*, **89**, 25923d, (*sulfate, synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TDH250; TDH750