



>>Entry Name: Tetrabutylphosphonium(1+)

CAS Registry Number: 15853-37-9

$[\text{P}(\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3)_4]^{(+)}$

Molecular Formula: $\text{C}_{16}\text{H}_{36}\text{P}^{(+)}$

Molecular Weight: 259.434

Accurate Mass: 259.255462

Percentage Composition: C 74.08%; H 13.99%; P 11.94%

>>Derivative: Chloride

CAS Registry Number: 2304-30-5

Molecular Formula: $\text{C}_{16}\text{H}_{36}\text{ClP}$

Molecular Weight: 294.887

Accurate Mass: 294.224314

Percentage Composition: C 65.17%; H 12.30%; Cl 12.02%; P 10.50%

Use/Importance: Used as a 0.3% aq. soln. for $\text{ClO}_4^{(-)}$ extraction. Corrosion inhibitor. Protects bone marrow progenitor cells against mechlorethamine cytotoxicity

Physical Description: Cryst.

Melting Point: Mp 94-95° (67°, 80-83°)

Hazard & Toxicity: LD₅₀ (rat, orl) 916 mg/kg

Aldrich: 14480-0

Fluka: 86919

>>Derivative: Bromide

CAS Registry Number: 3115-68-2

Molecular Formula: $\text{C}_{16}\text{H}_{36}\text{BrP}$

Molecular Weight: 339.338

Accurate Mass: 338.193798

Percentage Composition: C 56.63%; H 10.69%; Br 23.55%; P 9.13%

Use/Importance: Polymerisation catalyst. Phase-transfer catalyst

Physical Description: Cryst. ($\text{Me}_2\text{CO}/\text{Et}_2\text{O}$)

Melting Point: Mp 112°. Mp 100-103°

Hazard & Toxicity: Skin irritant

Aldrich: 18913-8

Fluka: 86915

>>Derivative: Iodide

CAS Registry Number: 3115-66-0

Molecular Formula: $\text{C}_{16}\text{H}_{36}\text{IP}$

Molecular Weight: 386.339

Accurate Mass: 386.159935

Percentage Composition: C 49.74%; H 9.39%; I 32.85%; P 8.02%

Use/Importance: Phase-transfer catalyst

Physical Description: Cryst. ($\text{THF}/\text{Et}_2\text{O}$)

Melting Point: Mp 98-99°

>>Derivative: Acetate

CAS Registry Number: 30345-49-4

Molecular Formula: $\text{C}_{18}\text{H}_{39}\text{O}_2\text{P}$

Molecular Weight: 318.479

Accurate Mass: 318.268767

Percentage Composition: C 67.88%; H 12.34%; O 10.05%; P 9.73%

Use/Importance: Bactericide; phase transfer catalyst