



>>Entry Name: (Chloromethyl)triphenylphosphonium(1+)

CAS Registry Number: 50443-22-6

$\text{Ph}_3\text{P}^{(+)}\text{CH}_2\text{Cl}$

Molecular Formula: $\text{C}_{19}\text{H}_{17}\text{ClP}^{(+)}$

Molecular Weight: 311.77

Accurate Mass: 311.075639

Percentage Composition: C 73.20%; H 5.50%; Cl 11.37%; P 9.93%

Use/Importance: Source of ylide used in Wittig reactions for chloromethylenation of aldehydes and ketones

>>Derivative: Chloride

CAS Registry Number: 5293-84-5

Molecular Formula: $\text{C}_{19}\text{H}_{17}\text{Cl}_2\text{P}$

Molecular Weight: 347.222

Accurate Mass: 346.044491

Percentage Composition: C 65.72%; H 4.93%; Cl 20.42%; P 8.92%

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

Melting Point: Mp 253°

Hazard & Toxicity: Irritant

Aldrich: 37701-5

Fluka: 25305

>>Derivative: Iodide

CAS Registry Number: 68089-86-1

Molecular Formula: $\text{C}_{19}\text{H}_{17}\text{ClIP}$

Molecular Weight: 438.674

Accurate Mass: 437.980112

Percentage Composition: C 52.02%; H 3.91%; Cl 8.08%; I 28.93%; P 7.06%

Physical Description: Cryst. (EtOH)

Melting Point: Mp 185-187°. Mp 206°

>>Derivative: Tetrafluoroborate

Molecular Formula: $\text{C}_{19}\text{H}_{17}\text{BClF}_4\text{P}$

Molecular Weight: 398.574

Accurate Mass: 398.078556

Percentage Composition: C 57.26%; H 4.30%; B 2.71%; Cl 8.89%; F 19.07%; P 7.77%

Physical Description: Yellow cryst. (EtOH aq.)

Melting Point: Mp 201-203°

>>Derivative: Tetraphenylborate

Molecular Formula: $\text{C}_{43}\text{H}_{37}\text{BClP}$

Molecular Weight: 631.003

Accurate Mass: 630.241444

Percentage Composition: C 81.85%; H 5.91%; B 1.71%; Cl 5.62%; P 4.91%

Physical Description: Solid

Melting Point: Mp 190-193 dec.°

>>Derivative: Ylide

References: