



>>Entry Name: Tributylphosphine, 9CI, 8CI

CAS Registry Number: 998-40-3

$\text{P}(\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3)_3$

Molecular Formula: $\text{C}_{12}\text{H}_{27}\text{P}$

Molecular Weight: 202.319

Accurate Mass: 202.185037

Percentage Composition: C 71.24%; H 13.45%; P 15.31%

Use/Importance: Reagent for deoxygenation of epoxides and peroxides, and desulfurizations of thiiranes, and polysulfides. Ligand for metals of Groups IB, IIB, IVB, VB, VIB, VIII. Used as C_6H_6 soln. for extraction-separation of In (as ion-associate with $\text{InBr}_4^{(-)}$, diisopropyl ether)

Physical Description: Liq. with garlic-like odour

Melting Point: Fp 40°

Boiling Point: Bp 245° (240°). Bp₂₀ 130°

Solubility: Misc. org. solvs.

Refractive Index: n_D^{20} 1.4635

Hazard & Toxicity: Pyrophoric, flammable, fl. p. 40° , autoignition temp. 200°

Aldrich: 24704-9

Fluka: 90827

Sigma: T6918

>>Derivative: Methiodide

Synonym(s): Tributylmethylphosphonium iodide

CAS Registry Number: 1702-42-7

Molecular Formula: $\text{C}_{13}\text{H}_{30}\text{IP}$

Molecular Weight: 344.258

Accurate Mass: 344.112985

Percentage Composition: C 45.36%; H 8.78%; I 36.86%; P 9.00%

Physical Description: Solid

Melting Point: Mp $130\text{-}133^\circ$

>>Derivative: Oxide

>>Derivative: Sulfide

>>Derivative: Selenide

>>Derivative: Telluride

CAS Registry Number: 2935-46-8

Molecular Formula: $\text{C}_{12}\text{H}_{27}\text{PTe}$

Molecular Weight: 329.919

Accurate Mass: 332.091266

Percentage Composition: C 43.69%; H 8.25%; P 9.39%; Te 38.68%

Physical Description: Yellow cryst. (petrol)

Melting Point: Mp $35\text{-}35.5^\circ$

Other Data: Rather unstable to light and glass with liberation of Te

>>Derivative: Compd. with BH_3

CAS Registry Number: 4259-20-5

Boiling Point: Bp_{0.8} $115\text{-}117^\circ$

Aldrich: 23376-5