



>>Entry Name: ***O,O*-Diethyl phosphorodithioate**, 9Cl, 8Cl

Synonym(s): *O,O*-Diethyl dithiophosphate. *O,O*-Diethyl dithiophosphoric acid. Diethoxo(hydrogensulfido)thiophosphorus(*V*)

CAS Registry Number: 298-06-6

(EtO)₂P(S)SH

Molecular Formula: C₄H₁₁O₂PS₂

Molecular Weight: 186.235

Accurate Mass: 185.993807

Percentage Composition: C 25.80%; H 5.95%; O 17.18%; P 16.63%; S 34.44%

Use/Importance: Extractant for As(*III*) or Sb(*III*) in hexane from acid soln.; and also Bi(*III*) and Sb(*III*) in EtOAc/1*M* HClO₄ in the presence of Sn(*II*), Cu(*II*), Pb(*II*), Cd(*II*), Zn(*II*) and Tl(*I*). Used as 1% aq. soln. for extraction-photometric detn. of Re; potentiometric detn. of Cu(*II*)

Physical Description: Liq.

Boiling Point: Bp₉ 92-94°. Bp₁ 60°

Solubility: Sol. H₂O

Density: d₄²⁰ 1.17

pKa Value: pK_{a1} 2.84 (EtOH) pK_{a1} 1.62 (20°, 7% EtOH aq.)

Refractive Index: n_D²⁰ 1.5120 n_D²⁰ 1.5070

Aldrich: D9360-0

>>Derivative: Na salt

Synonym(s): Hostaflot

CAS Registry Number: 3338-24-7

Use/Importance: Used in flotation of U and Cd ores

Aldrich: 34722-1

>>Derivative: K salt

CAS Registry Number: 3454-66-8

Physical Description: Cryst. (EtOH/Et₂O)

Melting Point: Mp 152-153°. Mp 195°

Aldrich: 44515-0

>>Derivative: NH₄ salt

CAS Registry Number: 1068-22-0

Use/Importance: Employed for detn. of Ni in presence of other metals

Physical Description: Cryst.

Melting Point: Mp 164-166°

Aldrich: 17779-2

>>Derivative: Et₂NH₂ salt

CAS Registry Number: 39857-88-0

Physical Description: Cryst. (C₆H₆/petrol)

Melting Point: Mp 83-85°

>>Derivative: Morpholinium salt

Physical Description: Solid

Melting Point: Mp 79-81°

References: