



>>Entry Name: Demeton-O

Synonym(s): *O,O*-Diethyl *O*-[2-(ethylthio)ethyl]phosphorothioate, 9Cl, 8Cl. Demetonthione

CAS Registry Number: 298-03-3

Related CAS Registry Numbers(s): 8065-48-3



Molecular Formula: C₈H₁₉O₃PS₂

Molecular Weight: 258.342

Accurate Mass: 258.051322

Percentage Composition: C 37.19%; H 7.41%; O 18.58%; P 11.99%; S 24.82%

Use/Importance: Powerful systemic agricultural insecticide

Physical Description: Liq.

Boiling Point: Bp_{0.15} 92-93°

Density: d₄²¹ 1.119

Refractive Index: n_D²² 1.4865

Other Data: On heating at 130° is converted to Demeton-S [BGJ21-Y](#). A mixt. of the isomers is used commercially as Demeton or Systox

Hazard & Toxicity: LD₅₀ (rat, orl) 7.5 mg/kg. Cholinesterase inhibitor

References:

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Hoffman, F.W. *et al.*, *J.A.C.S.*, 1958, **80**, 1150, (*synth*)

Gore, R.C. *et al.*, *J. Assoc. Off. Anal. Chem.*, 1971, **54**, 1040, (*ir, uv*)

Stan, H.-J. *et al.*, *Biomed. Mass Spectrom.*, 1982, **9**, 483, (*ms*)

Ripley, B.D. *et al.*, *J. Assoc. Off. Anal. Chem.*, 1983, **66**, 1084, (*glc*)

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