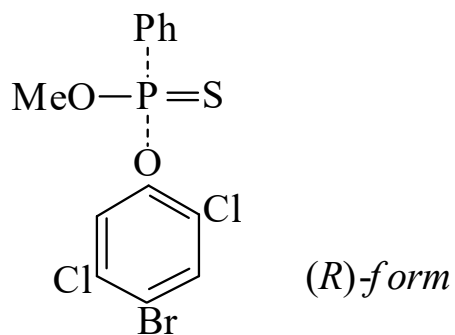




>>Entry Name: Leptophos, BSI

ENTRY UNDER REVIEW

Synonym(s): *O*-4-Bromo-2,5-dichlorophenyl *O*-methyl phenylphosphonothioate, 9Cl. Phosvel. Abar



CAS Registry Number: 21609-90-5

Molecular Formula: C₁₃H₁₀BrCl₂O₂PS

Molecular Weight: 412.07

Accurate Mass: 409.889952

Percentage Composition: C 37.89%; H 2.45%; Br 19.39%; Cl 17.21%; O 7.77%; P 7.52%; S 7.78%

Hazard & Toxicity: Cholinesterase inhibitor. V. toxic if swallowed and in contact with skin. LD₅₀ (rat, orl) 19 mg/kg. LD₅₀ (rat, skn) 44 mg/kg. Exp. teratogen. Exp. neurotoxic effects

>>Variant: (*R*)-form

Molecular Formula: C₁₃H₁₀BrCl₂O₂PS

Molecular Weight: 412.07

Accurate Mass: 409.889952

Percentage Composition: C 37.89%; H 2.45%; Br 19.39%; Cl 17.21%; O 7.77%; P 7.52%; S 7.78%

Melting Point: Mp 88-90°

Optical Rotation: [α]_D²⁴+46.13 (c, 10.6 in C₆H₆)

Other Data: More toxic (housefly, mouse) than (*S*)-form

>>Variant: (*S*)-form

Molecular Formula: C₁₃H₁₀BrCl₂O₂PS

Molecular Weight: 412.07

Accurate Mass: 409.889952

Percentage Composition: C 37.89%; H 2.45%; Br 19.39%; Cl 17.21%; O 7.77%; P 7.52%; S 7.78%

Melting Point: Mp 88-90°

Optical Rotation: [α]_D²⁴-46.26 (c, 10 in C₆H₆) (98% op)

Other Data: Shows more delayed neurotoxic effect (hen) than (*R*)-form

>>Variant: (±)-form

Molecular Formula: C₁₃H₁₀BrCl₂O₂PS

Molecular Weight: 412.07

Accurate Mass: 409.889952

Percentage Composition: C 37.89%; H 2.45%; Br 19.39%; Cl 17.21%; O 7.77%; P 7.52%; S 7.78%

Use/Importance: Agricultural insecticide, now superseded

Physical Description: Cryst. (EtOH)

Melting Point: Mp 71-72°

Solubility: V. sol. hexane, Me₂CO, v. spar. sol. H₂O

Other Data: Stable at pH 1-7, dec. at pH >7. Degraded by uv

Hazard & Toxicity: Exhibits delayed neurotoxicity; causes irreversible ataxia

References: