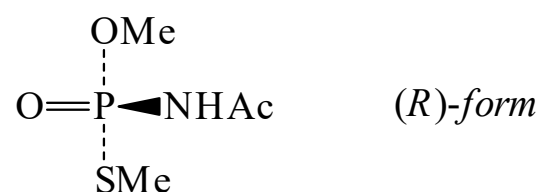




>>Entry Name: Acephate, ANSI, BSI, ESA, ISO, JMAF

Synonym(s): *O,S*-Dimethyl acetylphosphoramidothioate. Ortho 12420. Orthene. Pillarthene. Acetamidophos. Ortran. Asataf



CAS Registry Number: 30560-19-1

Related CAS Registry Numbers(s): 115182-37-1

Molecular Formula: C₄H₁₀NO₃PS

Molecular Weight: 183.168

Accurate Mass: 183.011901

Percentage Composition: C 26.23%; H 5.50%; N 7.65%; O 26.20%; P 16.91%; S 17.51%

Supelco: R60-0456

>>Variant: (*R*)-form

CAS Registry Number: 115182-36-0

Molecular Formula: C₄H₁₀NO₃PS

Molecular Weight: 183.168

Accurate Mass: 183.011901

Percentage Composition: C 26.23%; H 5.50%; N 7.65%; O 26.20%; P 16.91%; S 17.51%

Optical Rotation: [α]_D +64 (c, 0.1 in CHCl₃)

Other Data: Possesses much greater insecticidal activity towards houseflies than (*S*)-form

>>Variant: (±)-form

CAS Registry Number: 115096-11-2

Molecular Formula: C₄H₁₀NO₃PS

Molecular Weight: 183.168

Accurate Mass: 183.011901

Percentage Composition: C 26.23%; H 5.50%; N 7.65%; O 26.20%; P 16.91%; S 17.51%

Use/Importance: Contact and systemic insecticide of mod. persistence, weak anticholinesterase activity

Physical Description: Solid

Melting Point: Mp 93°

Solubility: V. sol. H₂O; spar. sol. aromatic solvs.

Other Data: Dec. on dist.

Hazard & Toxicity: LD₅₀ (rat, orl) 700-900 mg/kg

References:

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Schneider, P. *et al.*, *J. Prakt. Chem.*, 1982, **324**, 1063, (*props*)

Alawi, M.A., *Fresenius' Z. Anal. Chem.*, 1983, **315**, 358, (*hplc*)

Stan, H.-J. *et al.*, *J. Chromatogr.*, 1983, **279**, 173, (*glc*)

Miyazaki, A. *et al.*, *J. Agric. Food Chem.*, 1988, **36**, 835, (*resoln, synth, activity*)

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Patty's Ind. Hyg. Toxicol., 4th edn., Vol. 2, Wiley, 1993, 719, (*tox*)