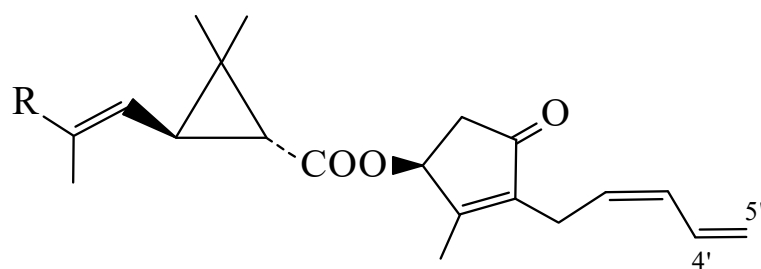




>>Entry Name: Pyrethrin I



R = CH₃
Absolute
configuration

CAS Registry Number: 121-21-1

Related CAS Registry Numbers(s): 8003-34-7

Molecular Formula: C₂₁H₂₈O₃

Molecular Weight: 328.45

Accurate Mass: 328.203845

Percentage Composition: C 76.79%; H 8.59%; O 14.61%

Biological Source: Constit. of pyrethrum flowers (*Chrysanthemum cinerariaefolium*)

Use/Importance: Natural insecticide. Sodium channel toxin

Physical Description: Oil

Boiling Point: Bp_{0.0005} 146-150°

Optical Rotation: [α]_D²⁰ -14 (2,2,3-trimethylpentane)

Hazard & Toxicity: LD₅₀ (rat, orl) 260 mg/kg. OES: long-term 5 mg m⁻³; short-term 10 mg m⁻³. Considered to have low human toxicity. Occup. exposure to pyrethroids can cause paresthesia and respiratory irritation

>>Derivative: 2,4-Dinitrophenylhydrazone

Physical Description: Cryst.

Melting Point: Mp 129-131°

Optical Rotation: [α]_D²⁰ -204 (c, 0.16 in C₆H₆)

>>Derivative: 4',5'-Dihydro

Synonym(s): Jasmolin I

CAS Registry Number: 4466-14-2

Molecular Formula: C₂₁H₃₀O₃

Molecular Weight: 330.466

Accurate Mass: 330.219495

Percentage Composition: C 76.33%; H 9.15%; O 14.52%

Biological Source: Minor constit. of flowers of *Chrysanthemum cinerariaefolium*

References:

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Godin, P.J. *et al.*, *J.C.S.(C)*, 1966, 332, (*isol, struct, deriv*)

Bramwell, A.F. *et al.*, *Tetrahedron*, 1969, **25**, 1727, (*pmr*)

Begley, M.J. *et al.*, *Chem. Comm.*, 1972, 1276, (*abs config*)

Rugutt, J.K. *et al.*, *J. Agric. Food Chem.*, 1999, **47**, 3402-3410, (*isol, pmr, cmr, conformn*)

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