



>>Entry Name: 2,6,8-Decatrienoic acid



Molecular Formula: $\text{C}_{10}\text{H}_{14}\text{O}_2$

Molecular Weight: 166.219

Accurate Mass: 166.09938

Percentage Composition: C 72.26%; H 8.49%; O 19.25%

Use/Importance: Powerful insecticide

Calculated Log P Data: Log P 3.15 (calc)

>>Variant: (2*E*,6*Z*,8*E*)-form

Synonym(s): Spilanthic acid

CAS Registry Number: 94450-21-2

Molecular Formula: $\text{C}_{10}\text{H}_{14}\text{O}_2$

Molecular Weight: 166.219

Accurate Mass: 166.09938

Percentage Composition: C 72.26%; H 8.49%; O 19.25%

>>Derivative: *N*-(2-Methylpropyl)amide

Synonym(s): Affinin. *N*-(2-Methylpropyl)-2,6,8-decatrienamide, 9Cl. *N*-Isobutyl-2,6,8-decatrienamide. Spilanthol

CAS Registry Number: 25394-57-4

Molecular Formula: $\text{C}_{14}\text{H}_{23}\text{NO}$

Molecular Weight: 221.342

Accurate Mass: 221.177964

Percentage Composition: C 75.97%; H 10.47%; N 6.33%; O 7.23%

Biological Source: Alkaloid from the roots of *Heliopsis longipes*, *Sapilanthus oleraceae* and *Sapilanthus acmella*

Physical Description: Pale-yellow viscous oil

Melting Point: Mp 23°

Boiling Point: Bp_{0.5} 165°. Bp_{0.001} 120-125°

Refractive Index: n_D²⁵ 1.5135

Other Data: In the earlier lit. *H. longipes* was incorrectly identified as *Erigeron affinis*

>>Variant: (all-*E*)-form

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Molecular Weight: 166.219

Accurate Mass: 166.09938

Percentage Composition: C 72.26%; H 8.49%; O 19.25%

>>Derivative: *N*-(2-Methylpropyl)amide

CAS Registry Number: 76361-77-8

Melting Point: Mp 91.5-92.5°

Boiling Point: Bp_{0.25} 145°

References:

- Asano, M. *et al.*, *Ber.*, 1932, **65**, 1602, (*isol*)
Gokhale, V.G. *et al.*, *J. Indian Chem. Soc.*, 1945, **22**, 250, (*isol*)
Acree, F. *et al.*, *J.O.C.*, 1945, **10**, 236; 449, (*isol*, *uv*, *struct*)
Jacobson, M. *et al.*, *J.O.C.*, 1947, **12**, 731
Jacobson, M., *J.A.C.S.*, 1955, **77**, 2461, (*synth*)
Jacobson, M., *Chem. Ind. (London)*, 1957, 50, (*struct*, *synth*)
Crombie, L. *et al.*, *J.C.S.*, 1963, 4970, (*ir*, *uv*, *synth*)
Correa, J. *et al.*, *Org. Magn. Reson.*, 1971, **3**, 1, (*pmr*, *struct*)
Yasuda, I. *et al.*, *Chem. Pharm. Bull.*, 1980, **28**, 2251, (*isol*, *pmr*, *cmr*, *ms*, *synth*, *struct*)
Martin, R. *et al.*, *Phytochemistry*, 1984, **23**, 1781-1783, (*isol*)