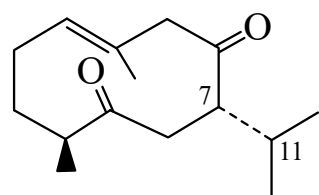




>>Entry Name: **1(10)-Germacrene-5,8-dione**

Synonym(s): 3-Isopropyl-6,10-dimethyl-6-cyclodecene-1,4-dione



(1(10)*E*,4*aH*,7*b H*)-form

Molecular Formula: C₁₅H₂₄O₂

Molecular Weight: 236.353

Accurate Mass: 236.17763

Percentage Composition: C 76.23%; H 10.23%; O 13.54%

Use/Importance: Used in China as an antineoplastic agent

Calculated Log P Data: Log P 3.16 (calc)

>>Variant: (1(10)*E*,4*aH*,7*βH*)-form

Synonym(s): **Curdione**

CAS Registry Number: 13657-68-6

Molecular Formula: C₁₅H₂₄O₂

Molecular Weight: 236.353

Accurate Mass: 236.17763

Percentage Composition: C 76.23%; H 10.23%; O 13.54%

Biological Source: Constit. of *Curcuma aeruginosa*, *Curcuma zedoaria* and *Curcuma wenyujin*

Physical Description: Cryst.

Melting Point: Mp 61-62°

Optical Rotation: [α]_D²⁵+26 (c, 1.00 in CHCl₃)

Solubility: BERDY SOL: Poorly sol. hexane

Calculated Log P Data: Log P 3.16 (calc)

Other Data: Pharmacol. active isomer

Hazard & Toxicity: LD₅₀ (mus, ipr) 414 mg/kg ; BERDY HAZD : LD₅₀ (mus, ipr) 414 mg/kg

>>Derivative: 7,11-Didehydro

Synonym(s): 1(10),7(11)-Germacradiene-5,8-dione. **Dehydrocurdione**

CAS Registry Number: 38230-32-9

Molecular Formula: C₁₅H₂₂O₂

Molecular Weight: 234.338

Accurate Mass: 234.16198

Percentage Composition: C 76.88%; H 9.46%; O 13.66%

Biological Source: From *Curcuma zedoaria*

Physical Description: Oil

Optical Rotation: [α]_D +67.9 (c, 0.5 in CHCl₃)

>>Variant: (1(10)*E*,4*aH*,7*αH*)-form

Synonym(s): **Neocurdione**

Molecular Formula: C₁₅H₂₄O₂

Molecular Weight: 236.353

Accurate Mass: 236.17763

Percentage Composition: C 76.23%; H 10.23%; O 13.54%

Biological Source: Constit. of *Curcuma wenyujin*

Physical Description: Cryst. (pentane)

Melting Point: Mp 45-47°

Optical Rotation: [α]_D²²-65.8 (c, 1.2 in CHCl₃)

References:

- Hikino, H. *et al.*, *Chem. Pharm. Bull.*, 1967, **15**, 1390; 1972, **20**, 987-989, (*isol, struct*)
Inayama, S. *et al.*, *Chem. Pharm. Bull.*, 1985, **33**, 1323-1326; 2179-2182, (*abs config, cryst struct*)
Shibuya, H. *et al.*, *Yakugaku Zasshi*, 1986, **106**, 212-216, (*isol, Dehydrocurdione*)
Harimaya, K. *et al.*, *Chem. Pharm. Bull.*, 1991, **39**, 843, (*isol, cryst struct, Neocurdione*)
Panddj, C. *et al.*, *Phytochemistry*, 1993, **34**, 415, (*isol*)