

## Curdione Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Curdione

**Catalog No.:** CFN99146

**Cas No.:** 13657-68-6

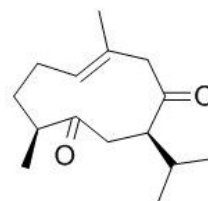
**Purity:** > 98%

**M.F:** C<sub>15</sub>H<sub>24</sub>O<sub>2</sub>

**M.W:** 236.34

**Physical Description:** Cryst.

**Synonyms:** (3S,6E,10S)-6,10-dimethyl-3-propan-2-ylcyclodec-6-ene-1,4-dione.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Food research;
6. Cosmetic research;
7. Others.

### [ Source ]

The rhizomes of *Curcuma zedoaria* (Berg.) Rosc.

## **[ Biological Activity or Inhibitors ]**

Curdione, isolated from the rhizome of *Curcuma zedoaria*, has the inhibitory effect on the production of prostaglandin E<sub>2</sub> in lipopolysaccharide (LPS)-stimulated mouse macrophage RAW 264.7 cells in a concentration-dependent manner (IC<sub>50</sub> = 1.1 µM); the suppression of cyclooxygenase-2 (COX-2) mRNA expression is, at least in part, involved in this inhibitory activity of curdione; the inhibitors of prostaglandin biosynthetic enzyme cyclooxygenase (COX) have played a role of anti-inflammatory and cancer chemopreventive agents; suggests that curdione may have anti-inflammatory and cancer chemopreventive activities.<sup>[1]</sup>

Curdione can induce the apoptosis of the human breast cancer cell line MCF-7, and block the cells at G<sub>1</sub>/G<sub>0</sub> phase, thereby inhibiting the proliferation of MCF-7 cells; and both mitochondrial pathway and death receptor pathway participate in the process to induce the apoptosis.<sup>[2]</sup>

Curdione shows significant anti-platelet aggregation and antithrombotic activities, the inhibitory mechanism of curdione on platelet aggregation may increase cAMP levels and subsequently inhibit intracellular Ca<sup>2+</sup> mobilization.<sup>[3]</sup>

Curdione plays an important role in the CYP3A4 inhibitory activity of *C. aromatica* and curdione might inhibit the activity by accelerating the degradation of CYP3A4.<sup>[4]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Diethyl ether, DMSO, Acetone, etc.

## **[ HPLC Method ]<sup>[5]</sup>**

Mobile phase: Acetonitrile : H<sub>2</sub>O=32:68;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 220 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Oh O J, Min H Y, Sang K L. *Arch. Pharm. Res.*, 2007, 30(10):1236-9.
- [2] Wang K, Li J, Wang J, *et al.* *Chinese Medical Association of Integrative Medicine physician Assembly Abstract Book*. 2014.
- [3] Xia Q, Wang X, Xu D J, *et al.* *Thromb. Res.*, 2012, 130(3):409-14.
- [4] Hou X L, Hayashinakamura E, Takataninakase T, *et al.* *Evid-Based .Compl. Alt. Med.*, 2011, 2011(5):1-9.
- [5] Li C W, Wang W H. *China Practical Medical*, 2006, 1(5):37-8.

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