

## Niranthin Datasheet

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

### [ Product Information ]

**Name:** Niranthin

**Catalog No.:** CFN98798

**Cas No.:** 50656-77-4

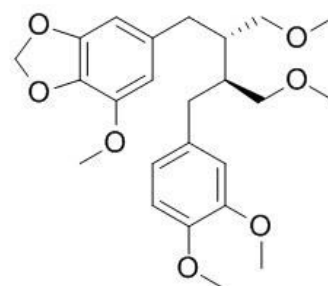
**Purity:** > 98%

**M.F:** C<sub>24</sub>H<sub>32</sub>O<sub>7</sub>

**M.W:** 432.5

**Physical Description:** Powder

**Synonyms:** 1,3-Benzodioxole,6-[(2R,3R)-4-(3,4-dimethoxyphenyl)-2,3-bis(methoxymethyl)butyl]-4-methoxy-,rel-.



### [ Intended Use ]

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

### [ Source ]

The herbs of *Phyllanthus amarus*.

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

Niranthin, a lignan isolated from *Phyllanthus amarus*, exhibits antiinflammatory and antiallodynic actions which are probably mediated through its direct antagonistic action on the platelet activating factor (PAF) receptor binding sites.<sup>[1]</sup>

Niranthin is a potent anti-leishmanial agent, it induces topoisomerase I-mediated DNA-protein adduct formation inside Leishmania cells and triggers apoptosis by activation of cellular nucleases, it inhibits the relaxation activity of heterodimeric type IB topoisomerase of *L. donovani* and acts as a non-competitive inhibitor interacting with both subunits of the enzyme; niranthin as a new drug candidate against drug-resistant leishmaniasis.<sup>[2]</sup>

Niranthin has hepatoprotective effect, it exhibits anti-hepatitis B virus activity both in vitro and in vivo.<sup>[3]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

## **[ HPLC Method ]**<sup>[4]</sup>

Mobile phase: Acetonitrile- H<sub>2</sub>O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 280 nm.

## **[ Storage ]**

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

## **[ References ]**

[1] Kassuya C A L, Silvestre A, Menezes-De-Lima O, *et al. Eur. J. Pharmacol.*, 2006, 546(3):182-8.

[2] Chowdhury S, Mukherjee T, Mukhopadhyay R, *et al. Embo Mol. Med.*, 2012, 4(10):1126-43.

[3] Sheng L, Wanxing W, Kaichuang S, *et al. J. Ethnopharmacol.*, 2014, 155(2):1061-7.

[4] Murugaiyah V, Chan K L. *J. Chromatogr. A*, 2007, 1154(1-2):198-204.

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