

## Goitrin Datasheet

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

### [ Product Information ]

**Name:** Goitrin

**Catalog No.:** CFN90623

**Cas No.:** 13190-34-6

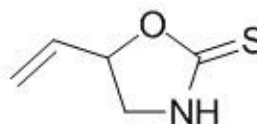
**Purity:** > 98%

**M.F:** C<sub>5</sub>H<sub>7</sub>NOS

**M.W:** 129.18

**Physical Description:** Powder

**Synonyms:** 5-Ethenyl-2-oxazolidinethione; 5-Vinyl-2-oxazolidinethione.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

### [ Source ]

The herbs of *Isatis indigotica*.

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

Goitrin and allyl isothiocyanate in Brussels sprouts, are responsible for the induction of glutathione S-transferases.<sup>[1]</sup>

Goitrin is the main bitterness compound in cruciferous vegetables, is a potent antithyroid compound, it has inhibition of dopamine  $\beta$ -Hydroxylase.<sup>[2,3]</sup>

R-goitrin- and BHA-induced modulation of aflatoxin B1 binding to DNA and biliary excretion of thiol conjugates in rats.<sup>[4]</sup>

At certain doses, R-goitrin can increase serum triglycerides, cholesterol, total protein, albumin and calcium, but it decrease serum thyroxine and urea; it causes a temporary increase in urinary ascorbic acid output in both sexes, but the liver ascorbic acid level was increased only in female rats; the duration of pentobarbital-induced sleep is significantly prolonged by R-goitrin pretreatment only in male rats.<sup>[5]</sup>

## **[ Solvent ]**

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

## **[ HPLC Method ]**<sup>[6]</sup>

Mobile phase: Methanol-0.02% Phosphate =7: 93;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C ;

The wave length of determination: 245 nm.

## **[ Storage ]**

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

## **[ References ]**

[1] Bogaards J J, Van O B, Falke H E, *et al. Food Chem.Toxicol.*, 1990, 28(2):81-8.

- [2] Wooding S, Gunn H, Ramos P, *et al.* *Chem.Senses*, 2010, 35(8):685-92.
- [3] Zenker N, Lou S H, Wright J. *J. Nat. Prod.*, 1988, 51(5):862-5.
- [4] Chang Y, Bjeldanes L F. *Carcinogenesis*, 1987, 8(4):585-90.
- [5] Nishie K, Daxenbichler E. *Food Chem.Toxicol.*, 1982, 20(3):279-87.
- [6] Shi Y H, Xie Z Y, Wu YC , *et al.* *Chinese Journal of Experimental Traditional Medical Formulae*, 2011, 17(8):128-30.

## **[ Contact ]**

**Address:**

S5-3 Building, No. 111, Dongfeng Rd.,  
Wuhan Economic and Technological Development Zone,  
Wuhan, Hubei 430056,  
China

**Email:** [info@chemfaces.com](mailto:info@chemfaces.com)

**Tel:** +86-27-84237783

**Fax:** +86-27-84254680

**Web:** [www.chemfaces.com](http://www.chemfaces.com)

**Tech Support:** [service@chemfaces.com](mailto:service@chemfaces.com)