# **PRODUCT** INFORMATION



(±)-Goitrin

Item No. 26382

| CAS Registry No.:  | 13190-34-6                        |
|--|-----------------------------------|
| Formal Name:   | 5-ethenyl-2-oxazolidinethione     |
| Synonyms:  | DL-Goitrin, (R,S)-Goitrin         |
| MF:  | C <sub>5</sub> H <sub>7</sub> NOS |
| FW:  | 129.2 S                           |
| Purity:  | ≥98% \ /                          |
| UV/Vis.:   | $\lambda_{max}$ : 246 nm O—       |
| Supplied as:   | A crystalline solid               |
| Storage:   | -20°C                             |
| Stability:   | ≥4 years                          |
| Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis. |                                   |

## Laboratory Procedures

 $(\pm)$ -Goitrin is supplied as a crystalline solid. A stock solution may be made by dissolving the  $(\pm)$ -goitrin in the solvent of choice, which should be purged with an inert gas. (±)-Goitrin is slightly soluble in ethanol and DMSO.

## Description

(±)-Goitrin is a goitrogen and antithyroid compound that has been found in plants of the Brassica family.<sup>1,2</sup> Dietary administration of (±)-goitrin (0.06-0.18% w/w) increases thyroid weight and decreases thyroid radioactive iodine uptake in rats fed a low-iodine diet.<sup>1</sup> It also increases thyroid weight in chicks in a dose-dependent manner.<sup>2</sup> ( $\pm$ )-Goitrin inhibits norepinephrine formation by bovine dopamine- $\beta$ -hydroxylase in vitro when used at a concentration of 0.2 mM.<sup>3</sup>

## References

- 1. Faiman, C., Ryan, R.J., and Eichel, H.J. Effect of goitrin analogues and related compounds on the rat thyroid gland. Endocrinology 81(1), 88-92 (1967).
- 2. Akiba, Y. and Matsumoto, J. Antithyroid activity of goitrin in chicks. Poult. Sci. 55(2), 716-719 (1976).
- 3. Zenker, N., Hubbard, L.S., and Wright, J. Inhibition of dopamine  $\beta$ -hydroxylase by goitrin, a natural antithyroid compound. J. Nat. Prod. 51(5), 862-865 (1988).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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