

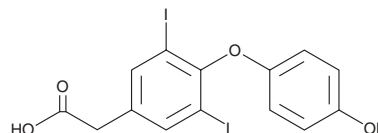
# PRODUCT INFORMATION



## 3,5-Diiodothyroacetic Acid

Item No. 22108

**CAS Registry No.:** 1155-40-4  
**Formal Name:** 4-(4-hydroxyphenoxy)-3,5-diiodo-benzeneacetic acid  
**Synonyms:** Diac, NSC 90463, T<sub>2</sub>A, TA<sub>2</sub>  
**MF:** C<sub>14</sub>H<sub>10</sub>I<sub>2</sub>O<sub>4</sub>  
**FW:** 496.0  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 229, 289 nm  
**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

3,5-Diiodothyroacetic acid (diac) is supplied as a crystalline solid. A stock solution may be made by dissolving the diac in the solvent of choice. Diac is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of diac in these solvents is approximately 30 mg/ml.

Diac is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, diac should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Diac has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Diac is an acetic acid derivative of thyroxine (Item No. 14116).<sup>1-3</sup> It inhibits copper-induced lipid peroxidation of LDL isolated from human plasma when used at a concentration of 1 μM.<sup>1</sup> Diac (5 mg/100 g diet) increases urinary and fecal excretion of sterols, as well as prevents high-fat diet-induced increases in liver lipid and cholesterol levels, in rats.<sup>2,3</sup>

### References

1. Chomard, P., Seguin, C., Loireau, A., *et al.* Effects of iodotyrosines, thyronines, iodothyroacetic acids and thyromimetic analogues on *in vitro* copper-induced oxidation of low-density lipoproteins. *Biochem. Pharmacol.* **55(10)**, 1591-1601 (1998).
2. Beher, W.T. and Baker, G.D. The effects of 3,5-diiodothyroacetic and 3,3', 5-triiodothyroacetic acids on the time course of steroid C-14 metabolism in the rat. *Henry Ford Hosp. Med. J.* **13(4)**, 427-433 (1965).
3. Ruegamer, W.R. and Silverman, F.R. Thyroxine analogues and cholesterol metabolism: The prevention and reversal of elevated liver cholesterol and lipid concentrations in the cholesterol fed rat by dietary 3,5 diiodothyroacetic acid. *Endocrinology* **68(4)**, 564-573 (1961).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM