

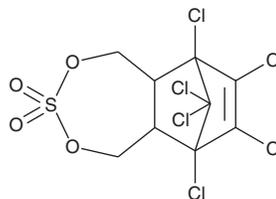
PRODUCT INFORMATION



Endosulfan sulfate

Item No. 24255

CAS Registry No.: 1031-07-8
Formal Name: 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepin, 3,3-dioxide
Synonym: Endosulfan III
MF: C₉H₆Cl₆O₄S
FW: 422.9
Purity: ≥98%
Supplied as: A 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

Endosulfan sulfate is supplied as a solid. A stock solution may be made by dissolving the endosulfan sulfate in the solvent of choice, which should be purged with an inert gas. Endosulfan sulfate is slightly soluble in methanol and DMSO.

Description

Endosulfan sulfate is a major metabolite of endosulfan, a broad-spectrum organochlorine insecticide.¹ Endosulfan sulfate is formed through oxidation of endosulfan by bacteria and fungi in the environment, where it is considered a persistent organic pollutant (POP). It accumulates in the liver and gonads of wild silverside fish (*O. bonariensis*) and is found in higher amounts in mature fish than pre-spawning fish.² Levels of endosulfan sulfate in the gills of mature *O. bonariensis* correlate with increased levels of lipid peroxidation. It is toxic to freshwater fish, including *G. affinis*, *H. formosa*, *P. latipinna*, and *P. promelas*, with LC₅₀ values ranging from 2.1 to 3.5 µg/L after a 96-hour exposure.³ Endosulfan sulfate is the main metabolite found in the liver of mice following endosulfan administration at doses of 0.3 and 3 mg/kg.⁴ It decreases the levels of glutathione (GSH) and malondialdehyde (MDA), a product of lipid peroxidation, in the liver, but increases MDA in the kidney when administered at a dose of 3 mg/kg.

References

1. Kataoka, R. and Takagi, K. Biodegradability and biodegradation pathways of endosulfan and endosulfan sulfate. *Appl. Microbiol. Biotechnol.* 97(8), 3285-3292 (2013).
2. Barni, M.F. Assessment of persistent organic pollutants accumulation and lipid peroxidation in two reproductive stages of wild silverside (*Odontesthes bonariensis*). *Ecotoxicol. Environ. Saf.* 99, 45-53 (2014).
3. Carriger, J.F., Hoang, T.C., Rand, G.M., et al. Acute toxicity and effects analysis of endosulfan sulfate to freshwater fish species. *Arch. Environ. Contam. Toxicol.* 60(2), 281-289 (2011).
4. Yan, J., Wang, D., Miao, J., et al. Discrepant effects of α-endosulfan, β-endosulfan, and endosulfan sulfate on oxidative stress and energy metabolism in the livers and kidneys of mice. *Chemosphere* 205, 223-233 (2018).

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, 11/11/2022

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