

Zinc Pyrithione

Catalog No: tcsc2679



Available Sizes

Size: 1g

Size: 5g



Specifications

CAS No:

13463-41-7

Formula:

$C_{10}H_8N_2O_2S_2Zn$

Pathway:

Membrane Transporter/Ion Channel

Target:

Proton Pump

Purity / Grade:

>98%

Solubility:

H₂O :

Observed Molecular Weight:

317.69

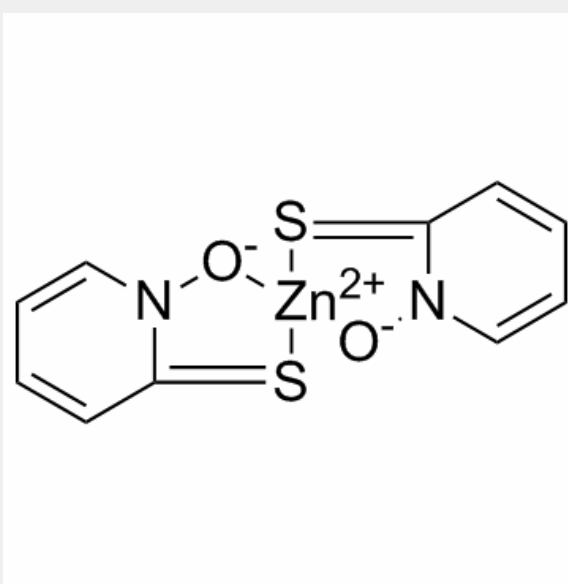
Product Description

Zinc Pyrithione is an antifungal and antibacterial agent disrupting membrane transport by blocking the proton pump.

Target: Proton Pump

Zinc pyrithione is considered as a coordination complex of zinc. The pyrithione ligands, which are formally monoanions, are chelated to Zn²⁺ via oxygen and sulfur centers. In the crystalline state, zinc pyrithione exists as a centrosymmetric dimer, where each zinc is

bonded to two sulfur and three oxygen centers. In solution, however, the dimers dissociate via scission of one Zn-O bond. Zinc pyrithione, which is a dimer but is probably biologically active as a monomer, induces plasma membrane depolarization with half-maximal effect ($K_{1/2}$) of about 0.3 mM [1]. Zinc pyrithione is an unusual synthetic potentiator that potently activates both heterologous and native M channels by inducing channel opening at the resting potential [2]. Zinc pyrithione rapidly accumulated in the tissues of the exposed mussels, proportionately to both exposure concentration and time. Even though the 7-d median lethal concentration (LC_{50}) = 8.27 μ M established here appears high with respect to reported ZnPT environmental concentrations, the results indicate that this biocide could represent a threat for marine organisms in coastal environments and that further investigations on its biological effects at sublethal doses are needed [3].



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