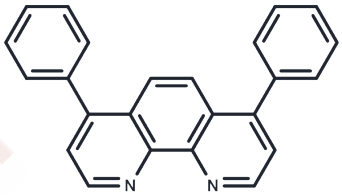
Data Sheet (Cat.No.T18919)

TargetMol

Bathophenanthroline

Chemical Properties



CAS No. : 1662-01-7

Formula: C24H16N2

Molecular Weight: 332.4

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Bathophenanthroline is a compound used for the measurement of iron concentrations in aqueous, urine, and serum samples by colorimetry.
Targets(IC50)	Others
In vitro	Iron concentration determination Operation steps: 1. Prepare the standard iron solution and the required Bathophenanthroline reagent solution (10-250uM). 2. Add Bathophenanthroline reagent to the sample to be tested. 3. Perform spectrophotometric measurements of the mixture within a spectral range of appropriate wavelengths (typically 535 nm). 4. Calculate the iron concentration in the sample according to the standard curve. 5. Analyze the iron concentration in water, serum or urine samples. Treatment of water and serum samples: Bathophenanthroline can react directly with the sample when the iron content is low; however, when the iron content is high, the sample may need to be diluted and the concentration of the reagent may be adjusted according to the experimental requirements. Notes: 1. Make sure there are no other interfering substances in the experiment, especially other metal ions that may react with Bathophenanthroline. 2. The reaction of Bathophenanthroline reagent is sensitive to environmental conditions (such as temperature, pH) and should be operated under appropriate conditions. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: < 0.1 mg/mL (insoluble), DMSO: 2.5 mg/mL (7.52 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0084 mL	15.0421 mL	30.0842 mL
5 mM	0.6017 mL	3.0084 mL	6.0168 mL
10 mM	0.3008 mL	1.5042 mL	3.0084 mL
50 mM	0.0602 mL	0.3008 mL	0.6017 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hernández-Gallardo AK, et al. In situ detection of ferric reductase activity in the intestinal lumen of an insect. J Biol Inorg Chem. 2024 Dec;29(7-8):773-784.
Masumura K,et al. Optimal composition of the poly(triarylamine)-based polymer composite to maximize photorefractive performance. Sci Rep. 2019 Jan 24;9(1):739.
Babinets LS, Shevchenko NA, Tsybulska LS. [Problem of mineral insufficiency at chronic pancreatitis in dependence on age]. Vopr Pitan. 2019;88(2):58-63. Russian.