

FT-474660



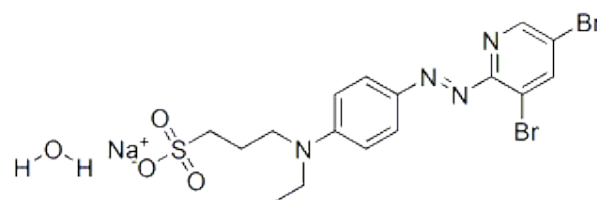
3,5-DiBr-PAESA

Product Description

Catalog #: 474660, 100mg 474663D, 1g

Name : **3,5-DiBr-PAESA**

Chemical name: 4-(3,5-Dibromo-2-pyridylazo)-N-ethyl-N-(3-sulphopropyl)aniline, monosodium salt, monohydrate
 Syn.: 3-((4-((3,5-dibromo-2-pyridinyl)azo)phenyl)ethylamino)-1-Propanesulfonic acid; 4-(3,5-Dibromo-2-pyridylazo)-N-ethyl-N-sulfopropylaniline; Dibr-paesa
 CAS: 100743-65-5



Properties :

(physical) Structure: $C_{16}H_{17}Br_2N_4O_3SNa \cdot H_2O$; **MW: 546.23 Da**
 Solubility: >0.66mg/ml in water (red clear solution)
 Molar absorptivity:
 (503nm): >32 000
 (637nm): >124 000[Cu Complex]

Storage : +4°C° Lyophilized powder can be stored intact at room temperature for short term. Storage at -4°C is recommended. For longer periods, it should be stored at -20°C. Protect from Light. Ship on blue ice. Stable 3years from date of manufacture

This reagent is intended for the quantitative determination of copper (Cu^{2+} and Cu^+) in biological samples.

● **Technical information**

●[□] The maximum wavelength and molar absorptivity of the Ag(I) complex are 618 nm and 80 000, respectively. The maximum wavelength and molar absorptivity of Cu(I) are 639 nm and 1.34×10^5 , respectively. The absorption maximum of the complex shifts to longer wavelengths and the molar absorptivity increases in the presence of anionic surfactants such as sodium dodecylsulfate.

●[□] Inside human body, approximately 95% of copper in the plasma is attached to alpha-2- globulin, ceruloplasmin and some enzymes with ferroxidase activity. The main role of protein containing copper is oxidation-reduction function. Copper deficiency is known to be associated with some diseases such as heart disease, osteoporosis, osteoarthritis, Menkes syndrome and Wilson's disease. It has been also reported that copper deficiency may cause reduction of anti-oxidative function in vivo. On the other hand, the excess copper is toxic.

●[□] Colorimetric assay can be designed using 3,5-DiBr-PAESA to quantitate Cu^{2+} & Cu^+ in serum, plasma, urine, saliva, tissue extract, cell lysate, biological fluid, food, beverage etc. , typically measured with a UV/Vis 96-well reader. Assay achieve a working range of 3-400 $\mu g/dL$ and operating time of 10min. Refer to the literature. The assay principle consists to dissociate copper from ceruloplasmin and other copper containing proteins, by denaturing agent in acidic condition. Free and protein-associated copper will form a copper -3-5 DiBr-PAESA complex, which can be detected by absorbance at 580 nm.



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References

(Assay examples)

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3) Yasuyuki Sakurai, Itsuki Anzai, and Yoshiaki Furukawa:

A Primary Role for Disulfide Formation in the Productive Folding of Prokaryotic Cu,Zn-superoxide dismutase.

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