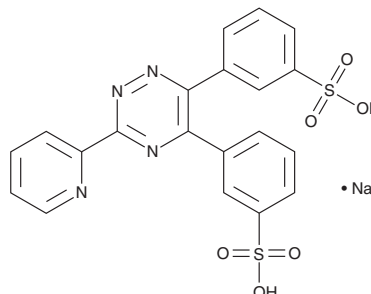


PRODUCT INFORMATION

3,3'-[3-(2-Pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid] (sodium salt)

Item No. 31465

CAS Registry No.: 1353005-64-7
Formal Name: 3,3'-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis-benzenesulfonic acid, monosodium salt
MF: C₂₀H₁₄N₄O₆S₂ • Na
FW: 493.5
Purity: ≥98% (mixture of isomers)
UV/Vis.: λ_{max}: 287 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

3,3'-[3-(2-Pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid] (sodium salt) is supplied as a crystalline solid. Aqueous solutions of 3,3'-[3-(2-Pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid] (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3,3'-[3-(2-Pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid] (sodium salt) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3,3'-[3-(2-Pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid] is a derivative of the colorimetric iron reagent ferrozine, which has commonly been used as a colorimetric reagent in the detection of iron.^{1,2} While ferrozine was originally reported to contain sulfonate groups in the 4,4' positions, some commercial preparations have been found to primarily contain other isomers, including an isomer with a 3,3'-sulfate substitution: 3,3'-[3-(2-pyridinyl)-1,2,4-triazine-5,6-diyl]bis[benzenesulfonic acid].^{1,3} Compounds containing the pyridyl-triazyl head group, which is found in ferrozine and its isomers, including the 3,3'-sulfonate-containing isomer, form a complex with ferrous iron (Fe²⁺) that can be quantified as a measure of iron concentration.^{1,4,5} Ferrozine-iron complexes can be quantified by colorimetric detection at 562 nm. This product primarily contains the 3,3'-sulfonate isomer with 4,4', 3,4', and 4,3'-sulfonate isomers as secondary or minor components.

References

1. Stookey, L.L. Ferrozine-A new spectrophotometric reagent for iron. *Anal. Chem.* **42(7)**, 779-781 (1970).
2. Jeitner, T.M. Optimized ferrozine-based assay for dissolved iron. *Anal. Biochem.* **454**, 36-37 (2014).
3. Riis-Johannessen, T., Schenk, K., and Severin, K. Turn-off-and-on: Chemosensing ensembles for sensing chloride in water by fluorescence spectroscopy. *Inorg. Chem.* **49(20)**, 9546-9553 (2010).
4. Hirayama, T. and Nagasawa, H. Chemical tools for detecting Fe ions. *J. Clin. Biochem. Nutr.* **60(1)**, 39-48 (2017).
5. Eskelinen, S., Haikonen, M., and Räisänen, S. Ferene-S as the chromogen for serum iron determinations. *Scand. J. Clin. Lab. Invest.* **43(5)**, 453-455 (1983).

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.

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