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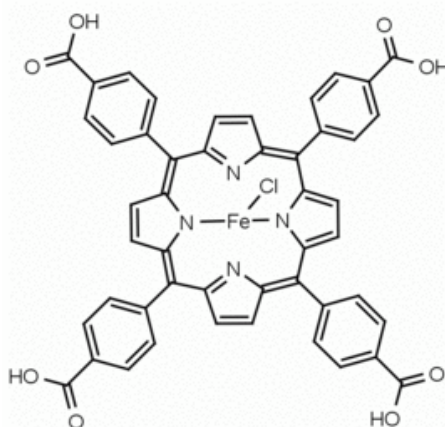
Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
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Phone: 1-435-753-1901
Catalog Number: **FeTCP**

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For research use only
Not intended or approved for
diagnostic or therapeutic use.

Product Name: Fe(III) meso-Tetra(4-carboxyphenyl)porphine chloride

Catalog Number: FeTCP



Sizes Available: 100 mg, 250 mg, 1 g, and larger sizes available

Molecular weight: 880.06 g/mol

Molecular Formula: C₄₈H₂₈ClFeN₄O₈

CAS Number: 55266-17-6

Storage: Store at room temperature, protected from light

Synonyms: 5,10,15,20-TETRAKIS-(4-CARBOXYPHENYL)-PORPHYRIN-Fe-(III) CHLORIDE, MESO-TETRAPHENYLPORPHINE-4,4',4'',4'''-TETRACARBOXYLIC ACID, IRON (III) CHLORIDE, Fe(III) MESO-TETRA(4-CARBOXYPHENYL)PORPHINE CHLORIDE

Field of Interest: Nanoparticles, Metal-Organic-Frameworks, MOFs, Photocatalysis, Remediation, Oxidation Reactions,

Background: Fe(III) meso-Tetra(4-carboxyphenyl)porphine chloride is a porphyrin and water soluble iron porphyrin that generates ROS as evidenced by ESR spectra, and is a biomimetic of cytochrome and Heme. ^{1,2} It is used in MOFs to react with organic molecules for nanofiltration, and in oxidation of biomolecules such as lignin and organic heterocycles ^{3,4}

References:

- 1) Kim, Yoon-Soo; Lee, Young-Chul; Lee, Hyun Uk; Huh, Yun Suk; Shin, Hyun-Jae, Visible-light-responsive porphyrin-incorporated TiO₂ treatment of diatom matrix, *Journal of Nanoscience and Nanotechnology* (2016), 16(9), 9699-9707. DOI:10.1166/jnn.2016.12038
- 2) Kohn, Tamar; Arnold, William A.; Roberts, A. Lynn, Reactivity of Substituted Benzotrichlorides toward Granular Iron, Cr(II), and an (II) Porphyrin: A Correlation Analysis, *Environmental Science & Technology* (2006), 40(13), 4253-4260. DOI:10.1021/es051737x.
- 3) Sharits, Andrew; Placido, Andrew; Morton, Samuel A., III; Morton, Laurel A., Oxidation of lignin model compounds using Fe(III)meso-tetra(4-sulfonatophenyl)porphine chloride and Fe(III)meso-tetra(4-carboxyphenyl)porphine, *Abstracts of Papers, 241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011* (2011), INOR-298.
- 4) Yu, Zongjiang; Zhai, Guoqing; Xian, Mo; Lu, Ming; Wang, Pengcheng; Jiang, Tao; Xu, Chao; Sun, Weizhi, Biomimetic Cleavage of Aryl-Nitrogen Bonds in N-Arylazoles Catalyzed by Metalloporphyrins, *Catalysis Letters* (2018), 148(9), 2636-2642., DOI:10.1007/s10562-018-2446-9

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **Fe(III) meso-Tetra(4-carboxyphenyl)porphine chloride** is manufactured, shipped according to standard practices, and intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Frontier Specialty Chemicals, Inc. warrants the product conforms to the specifications stated herein. In the event of nonconformity, Frontier will replace products or refund purchase price, at its sole option, and Frontier shall not be responsible for any other loss or damage, whether known or foreseeable to Frontier. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Frontier assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.