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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
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Catalog Number: **T973**

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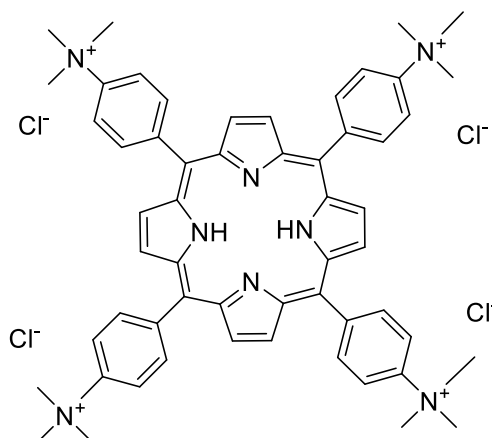
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For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: meso-Tetra(4-N,N,N-trimethylanilinium) porphine tetrachloride

Catalog Number: T973



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

Molecular weight: 988.9 g/mol

Molecular Formula: C₅₆H₆₂Cl₄N₈

CAS Number: 92739-64-5

Storage: Store at room temperature and protect from light.

Synonyms: Meso-Tetra(4-N,N,N-Trimethylanilinium) Porphine

Tetrachloride, 92739-64-5, ChEMBL4575600, Tetrakis(4-Trimethylammoniophenyl)

Porphyrin Tetra-Chloride, Meso-Tetra(4-N,N,N-Trimethylanilinium)Porphine tetrachloride

Field of Interest: Water Soluble Porphyrins, Photodynamic Therapy, Hydrogen Storage, Photoinactivation, Oligonucleotide Delivery

Background: meso-Tetra(4-N,N,N-trimethylanilinium) porphine tetrachloride is active as a photodynamic therapy agent against Murine LM3 tumor¹. Meso-Tetra (4-N,N,N-Trimethylanilinium) porphine has been used as a probe in the beta-hematin assay for antimalarial drug action². Meso-Tetra (4-N,N,N-Trimethylanilinium) porphine aggregates with anionic porphyrins where found to possess hydrogen storage potential in the solid state³. Cationic porphyrins such as meso-Tetra (4-N,N,N-Trimethylanilinium) porphine have been used for fluorescent DNA counterstaining in conjugation with immunofluorescence⁴. Meso-Tetra (4-N,N,N-Trimethylanilinium) porphine effectively inactivate Gram-negative bacteria by photoinactivation⁵. Water soluble cationic porphyrins such as Meso-Tetra (4-N,N,N-Trimethylanilinium) porphine show efficacy for the cellular delivery of oligonucleotides⁶.

References:

- 1) Colombo, L.L, Juarranz, A., Canete, M., Villanueva, A., Stockert, J.C.; Photodynamic Therapy of the Murine LM3 Tumor Using Meso-Tetra (4-N,N,N-Trimethylanilinium) porphine. *Int J Biomed Sci.* **2007**, *3*, 258-262. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3614653/>
- 2) Ziegler, J., Pasierb, L., Cole, K.A., Wright, D.W.; Metalloporphyrin probes for antimalarial drug action. *J Inorg Biochem* **2003**, *96*, 478-486. doi: 10.1016/s0162-0134(03)00253-8
- 3) Oztek, M.T.; Hampton, M.D., Slattery, D.K., Louks, S.; Hydrogen storage with hetero porphyrin aggregates. *International Journal of Hydrogen Energy* **2011**, *36*, 6705-6710. <https://doi.org/10.1016/j.ijhydene.2011.02.065>
- 4) Juarranz, A., Villanueva, A., Canete, M., Stockert, J.C.; Fluorescent porphyrin counterstaining of chromatin DNA in conjugation with immunofluorescence methods using FITC-labelled antibodies. *Journal of Microscopy* **1996**, *182*, 46-49. <https://doi.org/10.1046/j.1365-2818.1996.114394.x>
- 5) Merchat, M., Bertolini, G., Giacomini, P., Villanueva, A., Jori, G.; Meso-substituted cationic porphyrins as efficient photosensitizers of gram-positive and gram-negative bacteria. *Journal of Photochemistry and Photobiology B: Biology* **1996**, *32*, 153-157. [https://doi.org/10.1016/1011-1344\(95\)07147-4](https://doi.org/10.1016/1011-1344(95)07147-4)
- 6) Flynn, S.M., George, S.T., White, L., Devonish, E., Takle, G.B.; Water-Soluble, Meso-Substituted Cationic Porphyrins-a Family of Compounds for Cellular Delivery of Oligonucleotides. *BioTechniques* **1999**, *26*, 736-746. doi: 10.2144/99264rr03.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **meso-Tetra(4-N,N,N-trimethylanilinium) porphine tetrachloride** 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.

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