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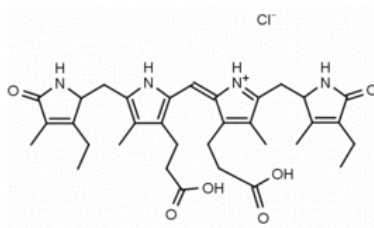
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Technical Data Sheet
Catalog Number: **U590-9**

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

Product Name: Urobilin hydrochloride

Catalog Number: U590-9



Sizes Available: 5 mg, 10 mg and larger sizes available

Molecular weight: 627.17 g/mol

Molecular Formula: C₃₃H₄₂N₄O₆ HCl

CAS Number: 28925-89-5

Storage: Store at 0 – 4 °C, protected from light

Synonyms:

Field of Interest: Heme Catabolism and Phase II Metabolism

Background: Urobilin Hydrochloride is produced via the oxidation of urobilinogen, a degradation product of bilirubin, and excreted in the urine. Bilirubin is a water insoluble tetrapyrrole produced from the reduction of biliverdin in a reaction catalyzed by the enzyme biliverdin reductase. Water insoluble bilirubin (also called indirect bilirubin) in vivo undergoes glucuronidation in the liver (addition of one or two glucuronic acids through a glycosidic bond) to form the water soluble bilirubin mono or diglucuronide (also called bilirubin conjugate or direct bilirubin). Bilirubin conjugate is excreted from the liver in bile or is converted to mesobilinogen via gut bacteria and then to urobilinogen and excreted in the urine as urobilin or stercobilinogen and excreted in the feces as stercobilin. Urobilin Hydrochloride is soluble in basic

aqueous solutions (pH > 9 for initial dissolution) and soluble down to pH 7 once in solution as well as methanol and ethanol if made slightly basic.¹⁻⁴

References:

- 1) Sampson, D. L., Y. L. Chang, et al. (2013). "The highly abundant urinary metabolite urobilin interferes with the bicinchoninic acid assay." *Analytical Biochemistry* 442(1): 110.
- 2) Quinn, K. D., N. Q. T. Nguyen, et al. (2012). "Tandem mass spectrometry of bilin tetrapyrroles by electrospray ionization and collision-induced dissociation." *Rapid Communications in Mass Spectrometry* 26(16): 1767.
- 3) Cuperus, F. J. C., A. M. Hafkamp, et al. (2009). "Effective Treatment of Unconjugated Hyperbilirubinemia With Oral Bile Salts in Gunn Rats." *Gastroenterology* 136(2): 673.
- 4) Mölzer, C., H. Huber, et al. (2012). "In vitro antioxidant capacity and antigenotoxic properties of protoporphyrin and structurally related tetrapyrroles." *Free Radical Research* 46(11): 1369-1377.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **Urobilin hydrochloride**

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.