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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
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Catalog Number: **S594-9**

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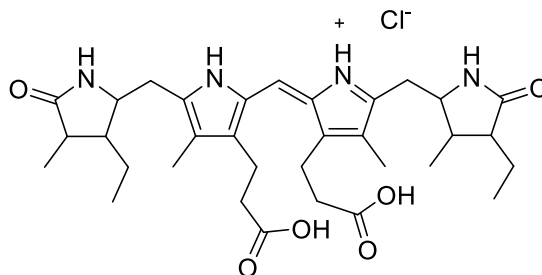
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For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: Stercobilin hydrochloride (mixture of isomers)

Catalog Number: S594-9



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

Molecular weight: 631.22 g/mol

Molecular Formula: C₃₃H₄₇ClN₄O₆

CAS Number: 34217-90-8

Storage: Store at 0 - 4 °C and protect from light.

Synonyms:

Stercobilin hydrochloride (mixture of isomers) CAS: 34217-90-8 MDL: MFCD00216795

Field of Interest: Heme Oxygenase Pathway, HIV Protease Inhibitors, Bile Pigments

Background: Stercobilin Hydrochloride is produced via the oxidation of stercobilinogen, a degradation product of bilirubin, and excreted in the feces. 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) 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. Stercobilin 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. Bile pigments including stercobilin are active as HIV protease inhibitors.

References:

- 1) 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.
- 2) Nakamura, T., T. Nagura, et al. (2010). "Promotive Effects of the Dietary Organic Germanium Poly-*trans*-[(2-carboxyethyl) germasesquioxane] (Ge-132) on the Secretion and Antioxidative Activity of Bile in Rodents." *Journal of Health Science* 56(1): 72.
- 3) Lee, W. H., J. M. Lee, et al. (2013). "Structural requirements within protoporphyrin IX in the inhibition of heat shock protein 90." *Chemico-Biological Interactions* 204(1): 49.
- 4) Molzer, C., B. Pflieger, et al. (2013). "In vitro DNA-damaging effects of intestinal and related tetrapyrroles in human cancer cells." *Experimental Cell Research* 319(4): 536.
- 5) F McPhee, P S Caldera, G W Bemis, A F McDonagh, I D Kuntz, and C S Craik. (1996). Bile pigments as HIV-1 protease inhibitors and their effects on HIV-1 viral maturation and infectivity in vitro. *Biochem J*.1996 Dec 1; 320(Pt 2): 681–686.

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