PRODUCT INFORMATION

Bile Acids MaxSpec® Discovery Mixture

Item No. 33505

Supplied as: A mixture in 1 ml methanol; in a deactivated glass ampule
Fill Volume: >1 ml
Concentration: See certificate of analysis for verified concentrations
Storage: -20°C
Stability: ≥3 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*
Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.

Description

Bile Acids MaxSpec® Discovery Mixture contains a variety of standards for the analysis of bile acids. Bile acids are formed in the liver primarily from cholesterol and then transformed by intestinal microbiota into a diverse array of secondary bile acids.[1,2] Primary and secondary bile acids can be modified by conjugation to glycine or taurine *via* an amide linkage. Bile acids are involved in the degradation of cholesterol in the liver and the solubilization of fatty acids in the small intestine and lipophilic xenobiotics in the biliary tract.[2] They also bind to and activate bile acid receptors, such as the farnesoid X receptor (FXR) and G protein-coupled bile acid-activated receptor (GP-BAR), which are involved in lipid, glucose, and energy metabolism.[3] The Bile Acids MaxSpec® Discovery Mixture contains primary and secondary bile acids, as well as glycine- and taurine-conjugated bile acids.

Bile Acids MaxSpec® Discovery Mixture has been prepared specifically for mass spectrometry and related applications where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. The verified concentration is provided on the certificate of analysis. This Bile Acids MaxSpec® Discovery Mixture is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. *Note: The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

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Contents

The Bile Acids MaxSpec® Discovery Mixture contains the following:

Item No.	Item Name	Concentration (nM)
31605	Tauroursodeoxycholic Acid	4,300
31602	Glycoursodeoxycholic Acid	2,300
31367	Ursodeoxycholic Acid	2,300
31614	Taurohyodeoxycholic Acid	2,000
31600	Glycohyodeoxycholic Acid	2,000
31606	Hyodeoxycholic Acid	3,300
31374	Taurocholic Acid	4,200
31347	Cholic Acid	1,200
31351	Glycocholic Acid	2,300
31361	Taurochenodeoxycholic Acid	4,000
31363	Glycochenodeoxycholic Acid	2,200
31365	Chenodeoxycholic Acid	3,400
31603	Taurodeoxycholic Acid	4,000
31599	Glycodeoxycholic Acid	2,100
31349	Deoxycholic Acid	2,300
31604	Taurolithocholic Acid	4,000
31601	Glycolithocholic Acid	2,200
31353	Lithocholic Acid	2,600

References

1. Hofmann, A.F. and Hagey, L.R. Bile acids: Chemistry, pathochemistry, biology, pathobiology, and therapeutics. *Cell. Mol. Life Sci.* **65(16)**, 2461-2483 (2008).
2. Dawson, P.A. and Karpen, S.J. Intestinal transport and metabolism of bile acids. *J. Lipid Res.* **56(6)**, 1085-1099 (2015).
3. Kuipers, F., Bloks, V.W., and Groen, A.K. Beyond intestinal soap—bile acids in metabolic control. *Nat. Rev. Endocrinol.* **10(8)**, 488-498 (2014).

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