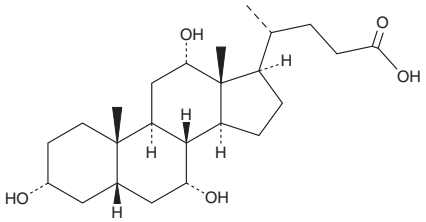
PRODUCT INFORMATION

Cholic Acid MaxSpec® Standard

Item No. 31347



CAS Registry No.: 81-25-4
Formal Name: (5β)-3α,7α,12α-trihydroxy-cholan-24-oic acid
Synonyms: CA, Cholalic Acid, Cholalin, NSC 6135
MF: $C_{24}H_{40}O_5$
FW: 408.6
Purity: ≥95%
Supplied as: A solution in methanol at 100 µg/ml; in a deactivated glass ampule
Concentration: 100.0 µg/ml (nominal); see certificate of analysis for verified concentration
Storage: -20°C
Stability: ≥5 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

Cholic acid is a primary bile acid.[1] It is formed from cholesterol *via* a multistep process catalyzed by the cytochrome P450 (CYP) isoforms CYP7A1, CYP8B1, and CYP27A1. Cholic acid is conjugated to glycine or taurine by bile acid-CoA:amino acid N-acyltransferase (BAAT) to produce glycocholic acid (GCA; Item No. 20276) and taurocholic acid (TCA; Item No. 16215), respectively, in the liver, and is transformed into the secondary bile acid deoxycholic acid (DCA; Item No. 20756) by intestinal microbiota.[1-3] It induces *C. difficile* colony formation in an agar dilution assay when used at a concentration of 0.1% w/v.[4] Dietary administration of cholic acid (0.4% w/w) increases serum cholesterol levels, biliary phospholipid secretion, and fecal DCA levels in rats.[5]

Cholic acid MaxSpec® standard is a quantitative grade standard of cholic acid (Item No. 20250) that has been prepared specifically for mass spectrometry or any application 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 Cholic acid MaxSpec® standard 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.*

References

1. Šarenac, T.M. and Mikov, M. *Front. Pharmacol.* **9**, 939 (2018).
2. Hunt, M.C., Siponen, M.I., and Alexson, S.E.H. *Biochim. Biophys. Acta* **1822(9)**, 1397-1410 (2012).
3. Staley, C., Weingarden, A.R., Khoruts, A., *et al. Appl. Microbiol. Biotechnol.* **101(1)**, 47-64 (2017).
4. Sorg, J.A. and Sonenshein, A.L. *J. Bacteriol.* **190(7)**, 2505-2012 (2008).
5. Uchida, K., Nomura, Y., and Takeuchi, N. *J. Biochem.* **87(1)**, 187-194 (1980).

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