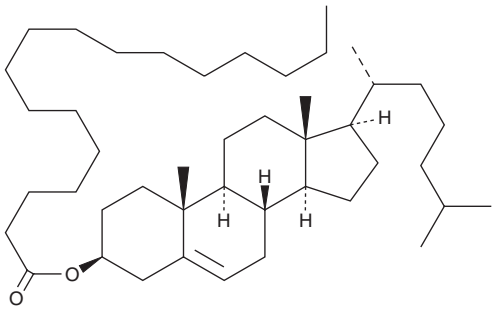
PRODUCT INFORMATION

Cholesteryl Heptadecanoate

Item No. 21750

CAS Registry No.:	24365-37-5
Formal Name:	cholest-5-en-3-ol (3β)-3-heptadecanoate
Synonyms:	Cholesteryl Margarate, Heptadecanoic Acid cholesteryl ester, Margaric Acid cholesteryl ester
MF:	$C_{44}H_{78}O_2$
FW:	639.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 201 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cholesteryl heptadecanoate is supplied as a crystalline solid. A stock solution may be made by dissolving the cholesteryl heptadecanoate in the solvent of choice. Cholesteryl heptadecanoate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of cholesteryl heptadecanoate in these solvents is >50 mg/ml.

Cholesteryl heptadecanoate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cholesteryl heptadecanoate should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Cholesteryl heptadecanoate has a solubility of <10 µg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cholesteryl heptadecanoate is a cholesterol ester (CE) formed by the condensation of cholesterol with heptadecanoic acid, a C-17 saturated fatty acid that does not occur in any natural animal or vegetable fat at high concentrations.[1] As such, it is commonly used as an internal standard for the quantification of cholesterol esters by GC- or LC-mass spectrometry. CEs are major constituents of lipoprotein particles carried in blood and accumulate in the fatty acid lesions of atherosclerotic plaques.[2,3] CEs of various fatty acids are major constituents of murine and human adrenal glands.[4]

References

1. Beare-Rogers, J., Dieffenbacher, A., and Holm, J.V. Lexicon of lipid nutrition. *Pure Appl. Chem.* **73(4)**, 685-744 (2001).
2. Johnston, T.P., Korolenko, T.A., Pirro, M., *et al.* Preventing cardiovascular heart disease: Promising nutraceutical and non-nutraceutical treatments for cholesterol management. *Pharmacol. Res.* **120**, 219-225 (2017).
3. Zakiev, E.R., Sukhorukov, V.N., Melnichenko, A.A., *et al.* Lipid composition of circulating multiple-modified low density lipoprotein. *Lipids Health Dis.* **15(1)**, 134 (2016).
4. Cheng, B. and Kowal, J. Analysis of adrenal cholesteryl esters by reversed phase high performance liquid chromatography. *J. Lipid Res.* **35(6)**, 1115-1121 (1994).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM