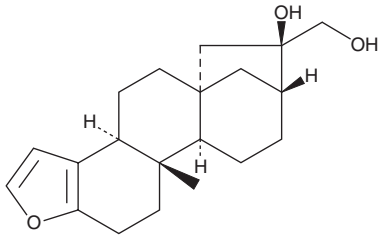
PRODUCT INFORMATION

Cafestol

Item No. 13999

CAS Registry No.:	469-83-0
Formal Name:	3bS,4,5,6,7R,8R,9,10,10aR,10bS,11,12-dodecahydro-7-hydroxy-10b-methyl-5aS,8-methano-5aH-cyclohepta[5,6]naphtho[2,1-b]furan-7-methanol
MF:	$C_{20}H_{28}O_3$
FW:	316.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 224 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

Cafestol is supplied as a crystalline solid. A stock solution may be made by dissolving the cafestol in the solvent of choice. Cafestol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of cafestol in ethanol and DMSO is approximately 5 mg/ml and approximately 12 mg/ml in DMF.

Cafestol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cafestol should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Cafestol has a solubility of approximately 0.02 mg/ml in a 1:50 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cafestol is a natural diterpene which is abundant in unfiltered coffee.[1,2] It elevates serum cholesterol and triglycerides in humans, an effect which does not seem to occur in monkeys, hamsters, rats, or gerbils.[3,4] Dietary cafestol does increase total cholesterol and triglycerides in ApoE3Leiden mice, an effect which is associated with selective activation of farnesoid X receptors and pregnane X receptors.[5] Cafestol (20 µM) also inhibits the proliferation of human umbilical vein endothelial cells and prevents their migration and tube formation on Matrigel™.[6]

References

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2. Naidoo, N., Chen, C., Rebello, S.A., *et al. Nutr. J.* **10(48)**, (2011).
3. Urgert, R., Schulz, A.G.M., and Katan, M.B. *Am. J. Clin. Nutr.* **61(1)**, 149-154 (1995).
4. de Roos, B., Sawyer, J.K., Katan, M.B., *et al. Proc. Nutr. Soc.* **58(3)**, 551-557 (1999).
5. Ricketts, M.L., Boekschoten, M.V., Kreeft, A.J., *et al. Mol. Endocrinol.* **21(7),** 1603-1616 (2007).
6. Wang, S., Yoon, Y.C., Sung, M.J., *et al. Biochem. Biophys. Res. Commun.* **421(3)**, 567-571 (2012).

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