

PRODUCT INFORMATION



25-hydroxy Vitamin D₃

Item No. 9000683

CAS Registry No.: 19356-17-3

Formal Name: 4-[(2Z)-2-[(5S)-5-hydroxy-2-methylenecyclohexylidene]ethylidene]octahydro- $\alpha,\alpha,\epsilon,7a$ -tetramethyl-($\epsilon R,1R,3aS,4E,7aR$)-1H-indene-1-pentanol

Synonyms: 25-hydroxy Cholecalciferol, RO 8-8892, U 32070E

MF: C₂₇H₄₄O₂

FW: 400.6

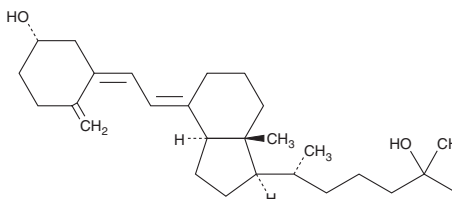
Purity: $\geq 98\%$

UV/Vis.: λ_{\max} : 213, 265 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

25-hydroxy Vitamin D₃ is supplied as a crystalline solid. A stock solution may be made by dissolving the 25-hydroxy vitamin D₃ in the solvent of choice, which should be purged with an inert gas. 25-hydroxy Vitamin D₃ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 25-hydroxy vitamin D₃ in ethanol and DMF is approximately 20 mg/ml and 10 mg/ml in DMSO.

25-hydroxy Vitamin D₃ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 25-hydroxy vitamin D₃ should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 25-hydroxy Vitamin D₃ has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Deficiency of vitamin D leads to abnormal calcium and phosphorus metabolism, contributing to deficiencies in bone formation, neuromuscular function, and inflammatory response. 25-hydroxy Vitamin D₃ is an intermediate in the pathway leading to the production of 1,25-dihydroxy vitamin D₃, the most receptor-active form of vitamin D. 25-hydroxy Vitamin D₃, produced in the liver from vitamin D₃, is metabolized in the kidney to 1,25-dihydroxy vitamin D₃. Plasma or serum levels of 25-hydroxy vitamin D₃ are commonly used as an indicator of an individual's vitamin D status.¹

Reference

1. Peterlik, M., Boonen, S., Cross, H.S., *et al.* Vitamin D and calcium insufficiency-related chronic diseases: An emerging world-wide public health problem. *Int. J. Environ. Res. Public Health* **6**, 2585-607 (2009).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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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