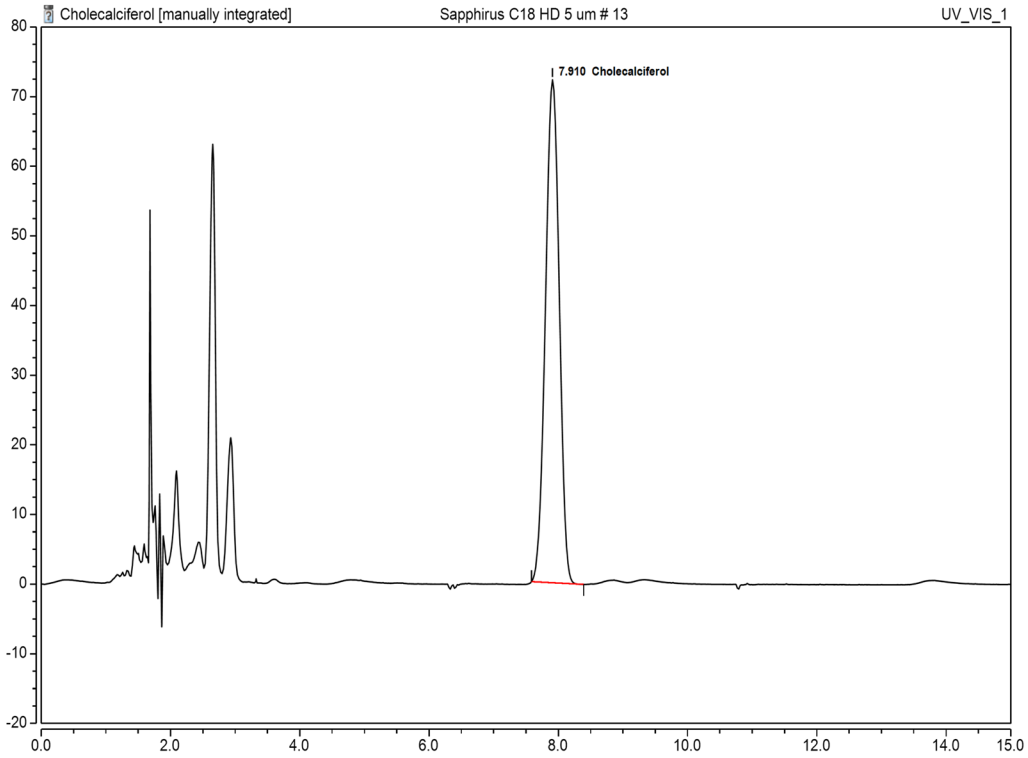
Vitamin D3(Cholecalciferol) Assay

Endurus® C18 HP 5µm 150X4.6



Test Condition
Column:
Sapphirus® C18 HP 150x4.6 mm, 5µm
Injection: 20 µL
Detection: UV 264 nm
Flow Rate: 1.0 mL/min
Mobile Phase: Methanol (See Table)
Diluent: Acetonitrile and Tetrahydrofuran (1:1) (v/v)
Temperature: 45°C
Autosampler temperature: 8°C
Sample preparation:
0.4 mg/mL of Vitamin D3(Cholecalciferol) in diluent. (10 mg of Cholecalciferol in 25 ml . Pipette out 2 ml and make to 50 ml with diluent.)
Pressure: 125 to 90 Bar

Chromatographic data

No.	Compound	Retention Time (min)	Resolution	Asymmetry
1	Cholecalciferol	7.910	-	0.98

Time (min)	A%	B%
0	0	100
15	0	100

Vitamin D3, or cholecalciferol, is present in various natural food sources, predominantly in fatty fish like salmon, mackerel, and tuna, as well as fish liver oils such as cod liver oil. Smaller amounts can also be found in animal products like egg yolks, cheese, and beef liver. However, the primary source of vitamin D3 is sunlight exposure, as the skin synthesizes it upon exposure to UVB rays
The Vitamin D3 (Cholecalciferol) assay was performed employing the Sapphirus® C18 HD 5µm 150x4.6 HPLC column. , Cholecalciferol manifested at a retention time of 7.910 minutes. Although the resolution for this compound was not explicitly delineated, the asymmetry value was meticulously documented at 0.98. These results affirm the efficacious identification and precise quantification of cholecalciferol within the analyzed sample.

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