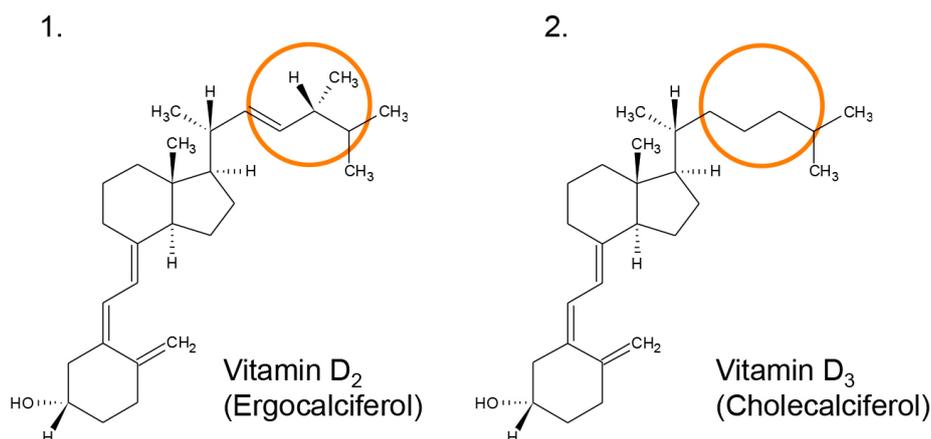


Separation of structural analogues: Vitamin D₂ and D₃

Vitamin D₂ (ergocalciferol) and D₃ (cholecalciferol) can be found in different foods including fatty fishes, meat, eggs and some mushrooms. Both are (indirectly) involved in a number of biological functions in the body, including bone metabolism and enhancement of intestinal absorption of calcium, iron, magnesium, phosphate and zinc. A regular intake of vitamin D therefore is essential.



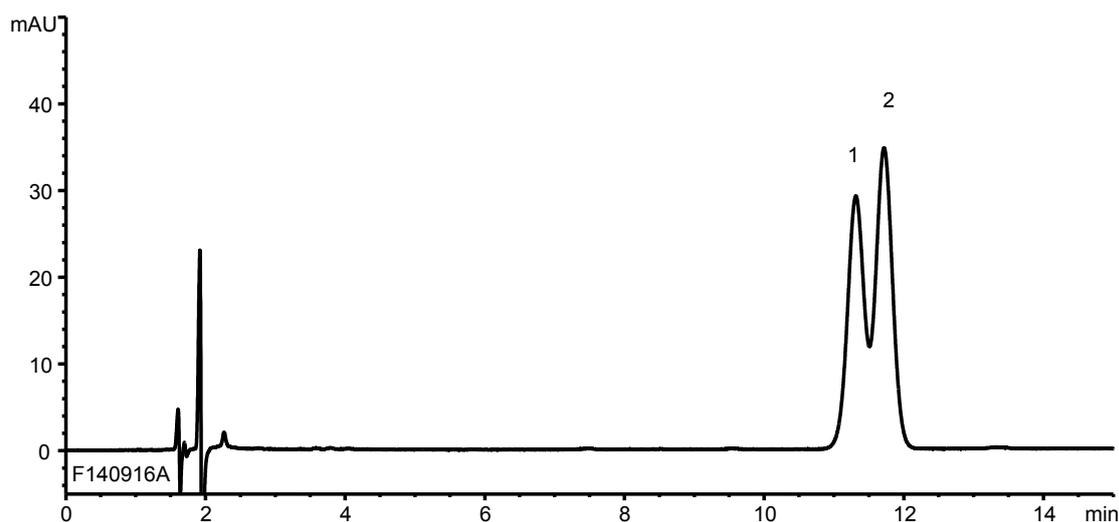
Separations of structurally similar compounds such as vitamin D₂ and vitamin D₃ are very challenging.



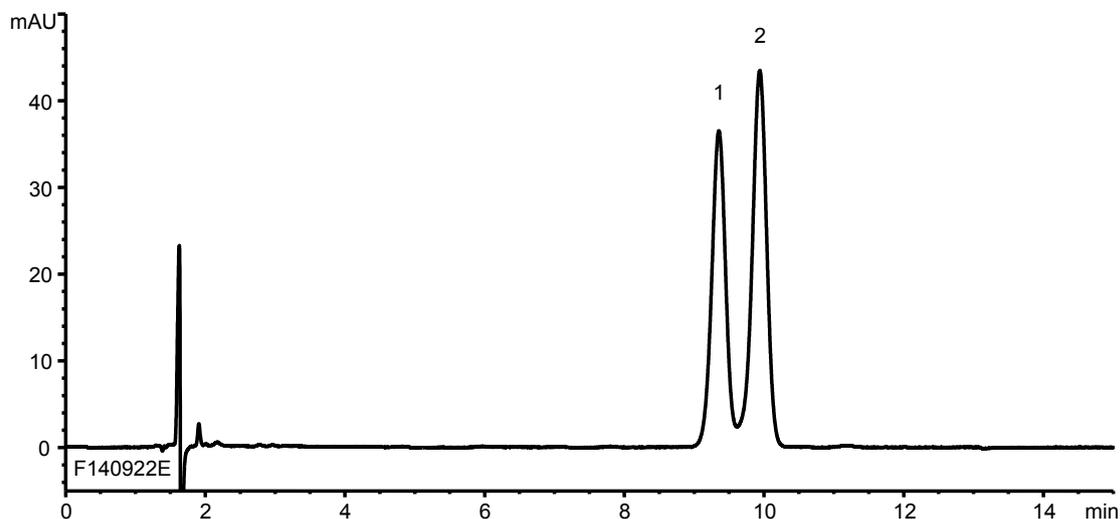
Standard C18 columns such as YMC-Triart C18 are not able to fully separate the two vitamins (Rs = 0.87). A very hydrophobic phase with a higher density and therefore amount of C18 chains is required. YMC-Triart C18 ExRS is able to separate these two with a resolution of Rs = 1.59 under the same conditions.

Separation of structural analogues: Vitamin D₂ and D₃

YMC-Triart C18



YMC-Triart C18 ExRS



Column: YMC-Triart C18 / YMC-Triart C18 ExRS, 5 μ m, 8 nm (150 x 3.0 mm ID)
 Part No.: TA12S05-1503PTH / TAR08S05-1503PTH
 Eluent: THF / acetonitrile (10/90)
 Flow rate: 0.425 ml/min
 Detection: UV at 265 nm
 Injection: 4.25 μ l (10 μ g/ml)
 Temperature: 30 °C