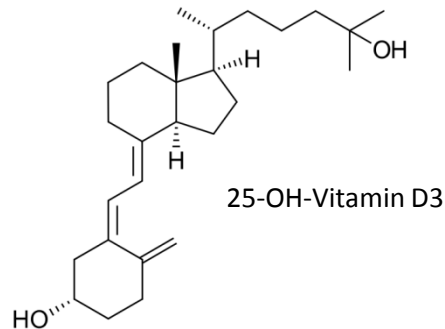


# Quantification of 25-OH-D3 and 3-epi-25-OH-D3 in plasma using LC-MS

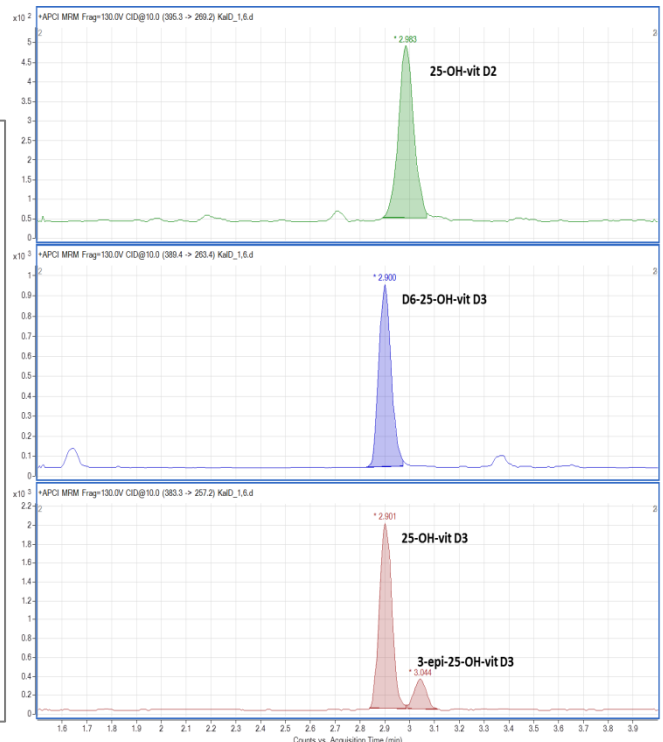
Calcifediol also known as 25-hydroxy-cholecalciferol or 25-hydroxyvitamin-D3 is a pre-hormone that is produced in the liver by hydroxylation of vitamin D3 (cholecalciferol). The blood concentration of 25OHD3 is considered the best indicator of vitamin D status. 25OHvitD2 is less important but is screened in case of D2 based medication is used.

Serum 25OHD3 is transported in the blood bound to vitamin D binding protein (DBS). Serum values greater than 50 nmol/L is regarded to indicate sufficient body stores.

Vitas AM-132 separates 25OHD analogues from matrix components. The 3-epimer is separated from 25OHD3. The method is based on Protein precipitation, liquid liquid extraction and RP-HPLC-MS/MS.



25OHD2, 25OHD3, 3-epi-25OHD3 and IS D6-25OHD3 in human plasma



## Method details:

- |                       |                    |
|-----------------------|--------------------|
| • Technique:          | RP-HPLC-APCI-MS/MS |
| • Sample Matrix:      | Plasma, serum      |
| • Species:            | All                |
| • Anticoagulant:      | All                |
| • Sample volume:      | 50 -100 $\mu$ L    |
| • Premature children: | 10 $\mu$ L         |
| • Shipping:           | Dry Ice            |
| • Method Range :      | 3-250 nM           |
| • LOD:                | 1 nM               |
| • Precision:          | 8.1 % - 13.4 %     |
| • Accuracy:           | NIST SRM, DEQAS    |

Vitas is a Norwegian GMP certified chemical analysis contract lab, with 20 years experience in providing a high quality, custom chromatographic analytical service based on cutting-edge knowledge and technology.