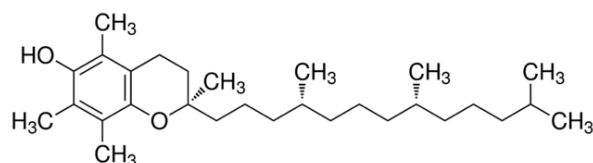


Quantitative analysis of alpha-tocopherol from whole blood in dried blood spots (DBS) using LC-FLD

Vitamin E refers to a group of ten lipid-soluble compounds that include both tocopherol and tocotrienols. Vitamin E has many biological functions, the antioxidant function being the most important and best known. α -tocopherol is the most biologically active form of vitamin E and the form that is preferentially absorbed and accumulated in humans.

Normal plasma concentration in humans for vitamin E measured as α -tocopherol is about 8-28 μ M. Vitamin E deficiency causes nerve problems due to poor conduction of electrical impulses along nerves due to changes in nerve membrane structure and function

Quantification of α -tocopherol from DBS is performed by a simple extraction and fluorescence detection (LC-FLD). A special stabilizing solution to impregnate the DBS card is needed.

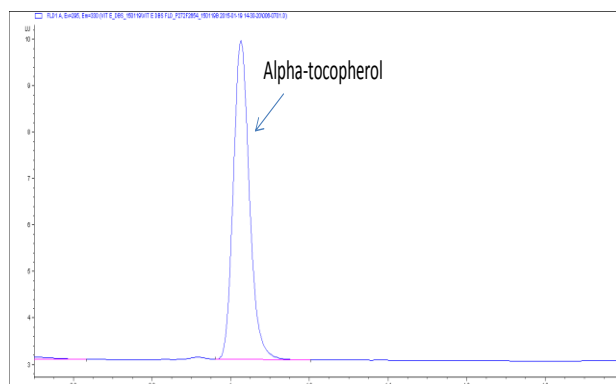


α -Tocopherol

Method details:

- Technique: LC-FLD
- Sample Matrix: Dried blood spot
- Species: human/animal
- Sample amount: One blood spot
- Range: 1-40 μ g/ml
- Detection Limit: 0.3 μ g/ml
- Quantification limit: 1.0 μ g/ml
- Intra-day precision: 1.6 %
- Shipping temp: Ambient in an O₂ proof aluminum bag

Chromatogram of α -Tocopherol in dried blood spots



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.