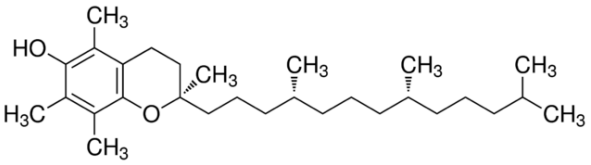
AM-155

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 µM. 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 fluorescense detection (LC-FLD). A special stabilizing solution to impregnate the DBS card is needed.

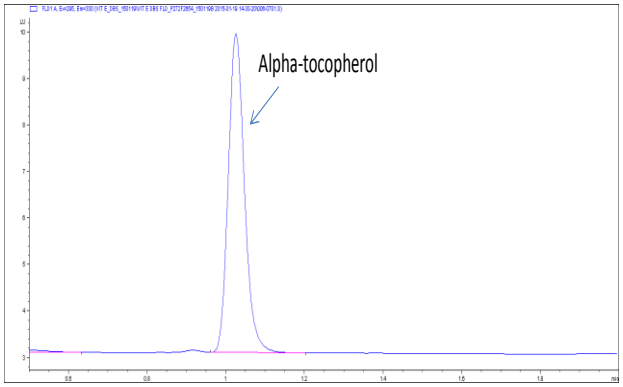


α-Tocopherol

Method details:

• Technique:	LC-FLD
• Sample Matrix:	Dried blood spot
• Spcecies:	human/animal
• Sample amount:	One blood spot
• Range:	1-40 µg/ml
• Detection Limit:	0.3 µg/ml
• Quantification limit:	1.0 µg/ml
• Intra-day precision:	1.6 %
• Shipping temp:	Ambient in an O_2 proof aluminum bag

Chromatogram of α-Tocopherol in dried blood spots



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