



Vitamin A&E in Serum/Plasma LC-MS/MS Analysis Kit

Vitamin A helps with healthy mucous membranes, skin, vision, tooth and bone growth, health of the immune system. Vitamin A in the plasma or serum is a reflection of the quantities of vitamin A and carotene ingested and absorbed by the intestine. Vitamin A plays an essential role in the function of the retina (adaptation to dim light), is necessary for growth and differentiation of epithelial tissue, and is required for growth of bone, reproduction, and embryonic development. Vitamin E helps to protect the cell walls. Vitamin E contributes to the normal maintenance of biomembranes, the vascular system, and the nervous systems; and provides antioxidant protection for vitamin A. Deficiency of vitamin E in children leads to reversible motor and sensory neuropathies; this problem also has been suspected in adults.

Highlights of the Analysis Kit



Analysis of vitamin A and E in one injection



Simple sample preparation without SPE or evaporation



Total analysis time: 6.0 min.

Parameters

Vitamin A and E

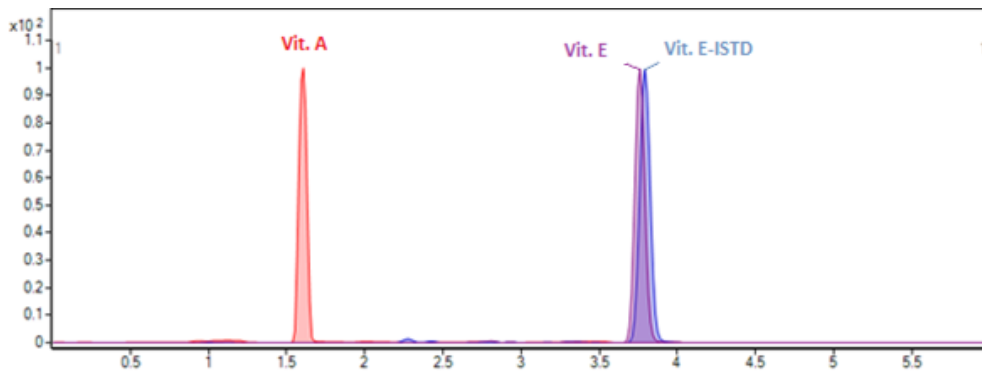
Sample Type

Serum/Plasma

Sample Preparation

1	Pipette 200 µl serum & plasma sample into a microcentrifuge tube
2	Add 25 µl of internal standard and 100 µl Reagent-1 then vortex for 5 sec.
3	Add 975 µl of Reagent-2 and vortex for 15 sec. Then, centrifuge at 10000-12000 rpm for 5 min.
4	Transfer the clear supernatant into an HPLC vial

Example Chromatogram



Total ion chromatogram of vitamins A and E

Method Performance

All validation results were obtained using Agilent 6470 QQQ system

Analytes	LOQ (mg/l)	Linearity (mg/l)	Recovery (%)	Repeatability (%CV)
Vitamin A	0.11	0.425 – 1.51	98	1.22
Vitamin E	0.17	7.24 – 19.5	99	1.30



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