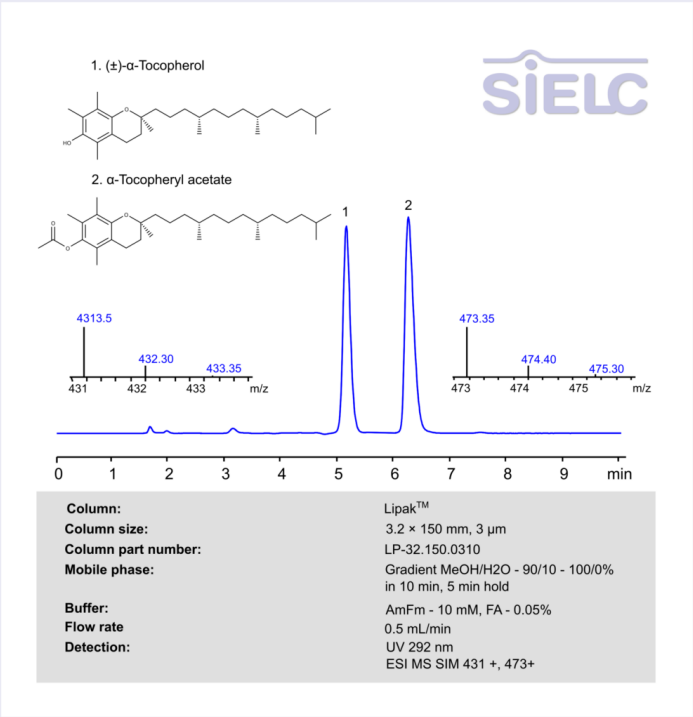
HPLC MS Method for Analysis of Vitamin E ((±)-α-Tocopherol) and Vitamin E Acetate (α-Tocopheryl Acetate) on Lipak Column



(±)-α-Tocopherol is a form of vitamin E, a fat-soluble antioxidant that protects cell membranes from oxidative damage by neutralizing free radicals. Widely found in dietary sources like nuts and vegetable oils, it plays a critical role in maintaining skin health, immune function, and overall cellular protection. α-Tocopheryl acetate, on the other hand, is a stable esterified form of α-tocopherol. Commonly used in dietary supplements and skincare products, it is converted to active α-tocopherol in the body, offering a prolonged shelf life and enhanced stability in formulations.

Vitamin E , Vitamin E Acetate can be retained, and analyzed using a Lipak mixed-mode stationary phase column. The analysis utilizes an gradient method with a mobile phase consisting of water, methanol (MeOH), ammonium formate and formic acid as a buffer. Detection is achieved using UV 292 nm or MS.

Method Parameters

Column	Lipak, 3.2 x 150 mm, 3 µm, 100 Å, dual ended
Mobile Phase	Gradient MeOH/H2O – 90/10 – 100/0% in 10 min, 5 min hold
Buffer	AmFm– 10 mM, FA – 0.05%
Flow Rate	0.5 mL/min
Detection	UV 292 nm ESIMSSIM431 +, 473+

Quelle: https://sielc.com/hplc-method-for-analysis-vitamin-e