

Combined Assays of Vitamins A & E in Serum/Plasma by HPLC and UHPLC



VITAMIN PROFILING

CE-IVD
certified

- ▶ One-Step Sample Preparation
- ▶ High Sample Throughput
- ▶ Automated Methods Available

Combined Assays of Vitamins A and E in Serum/Plasma

- ▶ CE-IVD certified solutions
- ▶ Assays available for any requirements:
 - Standard HPLC method
 - One-step sample preparation with pre-mixed reaction tubes
 - UHPLC methods for short analysis time
 - Automated methods for high sample throughput

				Automated Methods	
Assay no.	34000	34000/Premix	34900/UHPLC	34700/F	34900/F
Method	HPLC	HPLC	UHPLC	HPLC	UHPLC
Analysis time	9 min	9 min	3.5 min	9 min	3.5 min
Characteristics	Standard method	One-step sample preparation with pre-mixed tubes	One-step sample preparation with pre-mixed tubes Short analysis time	HPLC method, automated	UHPLC method, automated Short analysis time
Limit of quantification (mg/l)	Vitamin A 0.02 Vitamin E 0.25	Vitamin A 0.02 Vitamin E 0.25	Vitamin A 0.01 Vitamin E 0.1	Vitamin A 0.02 Vitamin E 0.5	Vitamin A 0.02 Vitamin E 0.4
Linearity (mg/l)	Vitamin A up to 5 Vitamin E up to 45	Vitamin A up to 4.5 Vitamin E up to 38	Vitamin A up to 4.5 Vitamin E up to 38	Vitamin A up to 4.5 Vitamin E up to 38	Vitamin A up to 4.5 Vitamin E up to 38
Recovery	Vitamin A 106 % Vitamin E 101 %	Vitamin A 99 % Vitamin E 96 %	Vitamin A 104 % Vitamin E 101 %	Vitamin A 94 % Vitamin E 90 %	Vitamin A 94 % Vitamin E 90 %
Intraassay	CV < 3 %	CV < 5 %	CV < 2 %	CV < 5 %	CV < 5 %
Interassay	CV < 5 %	CV < 6 %	CV < 3 %	CV < 5 %	CV < 5 %

Complete assays for any laboratory – as well as calibrators and controls.

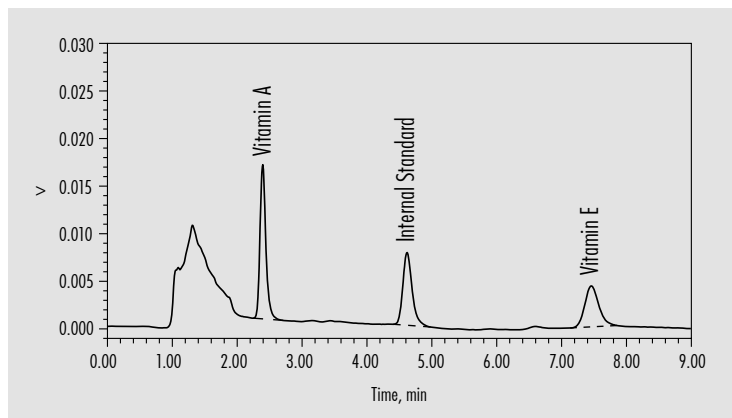


Sample Preparation

			Automated Methods	
34000	Standard	34000/Premix One-Step	34900/UHPLC One-Step	34700/F and 34900/F
To 200 µl sample/calibrator/control add 20 µl Internal Standard and 25 µl Precipitation Reagent I.		Pipette 100 µl sample/calibrator/control into a Pre-mixed Reaction Tube.	Pipette 100 µl sample/calibrator/control into a Pre-mixed Reaction Tube.	<ul style="list-style-type: none"> ▶ Load liquid handling device with samples, reagents, 96 well filter plate and collection plate. ▶ Start the automation routine.* ▶ After completion remove collection plate from the liquid handling device, seal with a heat seal and transfer to autosampler. ▶ Inject 50 µl eluate into the HPLC system or 5 µl eluate into the UHPLC system.
Mix 30 s (vortex).				
Add 400 µl Precipitation Reagent II.				
Mix 30 s (vortex).		Mix 30 s (vortex).	Mix 30 s (vortex).	
Centrifuge 10 min.		Centrifuge 10 min.	Centrifuge 10 min.	
Inject 50 µl of the supernatant into the HPLC system.		Inject 50 µl of the supernatant into the HPLC system.	Inject 5 µl of the supernatant into the UHPLC system.	

* Ready to use automation routine provided with the installation by Chromsystems.

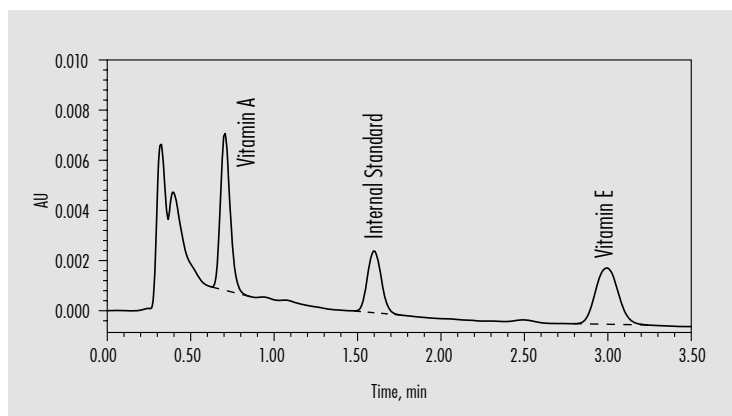
Technical Specifications



HPLC

HPLC Parameters

Injection volume: 50 µl
 Flow rate: 1.5 ml/min
 UV detector: λ (start) = 325 nm, after 3.5 min switch to λ = 295 nm
 Column temperature: ambient (≈ 25 °C)



UHPLC

UHPLC Parameters

Injection volume: 5 µl
 Flow rate: 0.6 ml/min
 UV detector: λ (start) = 325 nm, after 1.3 min switch to λ = 295 nm
 Column temperature: ≈ 35 °C

Ordering Information

Order No.	Kits	34000	34000/ Premix	34900/ UHPLC	34700/F	34900/F
Number of tests		100	100	1.000	5 x 96	10 x 96
Kit Components						
34001	Mobile Phase, 1000 ml	•	•		•	
34901*	Mobile Phase (for UHPLC), 500 ml			•		•
34004	Serum Calibration Standard, (lyoph.), 5 x 1 ml	•	•	•	•	•
34006	Precipitation Reagent I, 2.5 ml	•			•	•
34003	Precipitation Reagent II, 40 ml	•				
34008	Internal Standard, 2 ml	•				
33005	Reaction Vials, amber coloured, 100 pcs.	•				
34906	Pre-mixed Reaction Tubes, 100 pcs.		•	•		
34708	Internal Standard, 100 ml				•	•
34757	96 Well Filter Plates, 5 pcs.				•	•
34758	Collection Plates, 5 pcs.				•	•
34760	Pierceable Heat Seals for 96 Well Plates, 6 pcs.				•	•
18034	Precolumn Cartridge 4/10, 1 pcs.				•	
34200*	UHPLC Column, equilibrated, with test chromatogram, 1 pc.			•		•
19034	UHPLC Precolumn Cartridge, 1 pc.			•		•
Accessories						
34100	HPLC Column, equilibrated, with test chromatogram, 1 pc.	•	•		•	
34002	Mobile Phase, 10 x 1000 ml	•	•		•	
15009	PEEK-encased Prefilter, 5 µm, 5 pcs.	•	•		•	
15010	PEEK Prefilter Housing, 1 pc.	•	•		•	
18001	Precolumn Cartridge Holder 4/10, 1 pc.	•	•		•	
18034	Precolumn Cartridge 4/10, 1 pc.	•	•		•	
19001	UHPLC Precolumn Cartridge Holder, 1 pc.			•		•
19034	UHPLC Precolumn Cartridge, 1 pc.			•		•
Controls (lyoph.)						
0032	Vitamins A and E Serum Control, Bi-Level (I + II), 2 x 5 x 2 ml	•	•	•	•	•
0036	Vitamins A and E Serum Control, Level I, 5 x 2 ml	•	•	•	•	•
0037	Vitamins A and E Serum Control, Level II, 5 x 2 ml	•	•	•	•	•

* Mobile Phase and analytical column for the UHPLC assays are available only as part of the kit.

These products are not available in all countries. Please contact your local Chromsystems sales representative for availability in your region.