



# Determination of Vitamin C derivatives from cosmetic formulation on HPTLC Silica gel 60 F<sub>254</sub>S

## Chromatographic Conditions

Plate:	HPTLC Silica gel 60 F <sub>254</sub> S 20x10 cm
Article number:	1.15696.0001
Mobile Phase (v/v):	n-Heptane (1.04390) / THF (1.08107) 8:2 +0.1 % TFA (1.08262)
Migration distance:	5 cm
Chamber:	Normal chamber without chamber saturation
Derivatisation:	Anisaldehyde-sulfuric acid-reagent
Detection:	Visible light
Sample preparation:	1 g cosmetic formulation (1 % and 2 % active) was stirred in 10 ml THF for 15 min and filtered over a 0.45 µm syringe filter. Application by CAMAG ATS4 6 mm bandwise.



**Result:**  
No degradation products in both formulations at hRf 77

## Chromatographic Data

Track No.	Compounds	Concentration (mg/ml)	Solvent	Application volume µl	hRf
Formulation 1	1	Placebo	THF	2	
	2	1 % Vit C derivat	THF	2	58
	3	1 % Active 2	THF	2	58
	4	2 % Vit C Derivat	THF	2	58
	5	2 % Active2	THF	2	58
6, 7, 8, 9	Reference Vitamin C Derivat	1	Heptan/THF 1:1	0.2, 0.5, 1, 5	58
Formulation 2	10	Placebo	THF	2	
	11	1 % Vit C derivat	THF	2	58
	12	1 % Active 2	THF	2	
	13	2 % Vit C derivat	THF	2	58
14	2 % Active 2	THF	2		
15, 16, 17, 18	Reference Degradation product	1	THF	0.2, 0.5, 1, 5	77