

APPLICATIONS

Analysis of Chloroquine and Its Metabolite Desethylchloroquine by LC-MS/MS using Kinetex® Core-Shell F5 LC Column

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Overview

In this application note, we developed an LC-MS/MS method to analyze chloroquine (CQ), and its metabolite desethylchloroquine (DCQ), and hydroxychloroquine (HCQ), resulting in acceptable resolution and separation of the analytes.

LC-MS/MS Conditions

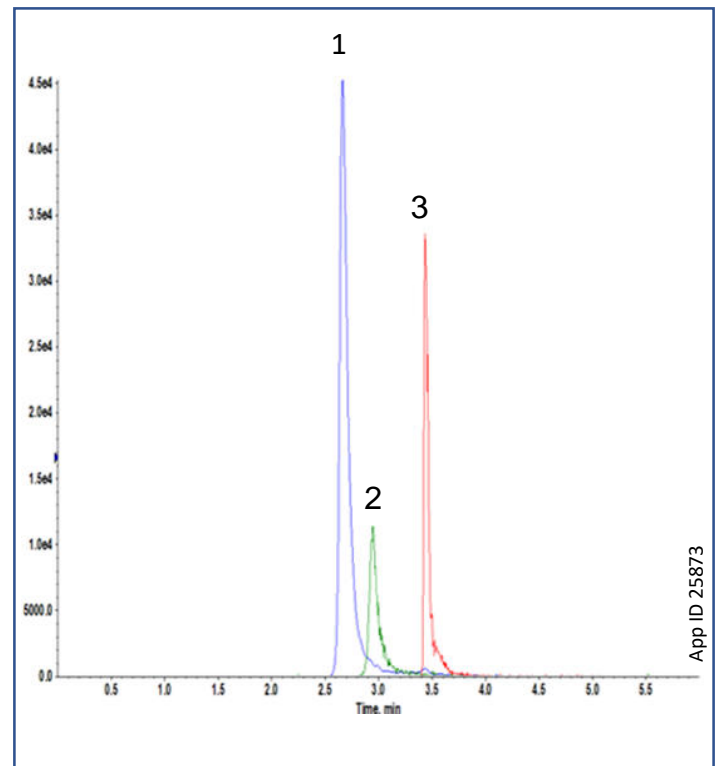
Column:	Kinetex 2.6 µm F5	
Dimension:	50 x 2.1 mm	
Part No.:	00B-4723-AN	
Mobile Phase:	A: Water with 0.1 % Formic Acid B: Methanol	
Gradient:	Time (min)	% B
	0.0	2
	2.0	7
	3.0	15
	3.2	40
	4.2	95
	4.3	2
	6.0	2
Flow Rate:	0.5 mL/min	
Temperature:	20 °C	
Detection:	MS/MS (MRM, SCIEX API 4000 QTRAP®)	
Sample:	Chloroquine mix	
	1. Desethylchloroquine (DCQ)	
	2. Hydroxychloroquine (HCQ)	
	3. Chloroquine (CQ)	

MS/MS Parameters

Ion Source	Turbo Spray, Positive
CUR	35
CAD	Medium
EP	10
GS1	60
GS2	60
IS	550
Source Temp	650 °C
iHe	ON
CEM	2200 (Detector, negative)

MS/MS Transitions

ID	Q1	Q3	Dwell	DP	CE	CXP
CQ (Quan)	320	247.1	50	65	33	10
CQ (Qual)	320	142.1	50	65	33	10
HCQ (Quan)	336.3	247.1	50	55	33	10
HCQ (Qual)	336.3	158.1	50	55	33	10
DCQ (Quan)	292.3	179.2	50	51	30	13
DCQ (Qual)	292.3	247.1	50	51	30	13



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