

APPLICATIONS

Extraction and Analysis of Uracil and 5-Fluorouracil from Serum Using Strata®-X-A Solid Phase Extraction Cartridge and Kinetex® PS C18 LC Column

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Overview

In this application, uracil and 5-fluorouracil were extracted from serum using a polymeric strong anion-exchange Strata-X-A SPE sorbent with high recoveries of both analytes and a good response using a Kinetex 2.6 µm PS C18 LC Column that was designed to deliver consistently sharper peaks for polar bases.

SPE Protocol

96-Well Plate: Strata-X-A 60 mg/well

Part No.: [8E-S123-UGB](#)

Condition: 1 mL Methanol

Equilibration: 1 mL Water

Load: 200 µL analyte spiked human serum was Diluted with 600 µL of 5% NH₄OH

Wash: 1 mL 1% NH₄OH in Water

Dry: For 1 minute at 15-20" of HG

Elute: 2x 500 µL of 1 % Formic acid in Methanol/Water (60:40)

Dry Down: In a speed vac to complete dryness

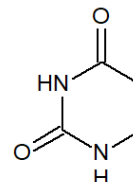
Reconstitute: 200 µL of initial mobile phase

Uracil

Molar mass: 112.088 g/mol

Acidic pK_a: 8.8

LogP: -0.55



5-Fluorouracil

Molar mass: 130.078 g/mol

Acidic pK_a: 7.18

LogP: -0.66

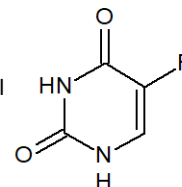


Table 1. % absolute recovery obtained from Serum Extraction(N=4)

Analyte	% Recovery	% CV
1. Uracil	69	1.14
2. 5-Fluorouracil	84	10.4

LC Conditions

Column: Kinetex® 2.6 µm PS C18

Dimension: 150 x 3 mm

Part No.: [00B-4462-Y0](#)

SecurityGuard™ ULTRA: [AJ0-8775](#)

Mobile Phase: A: 0.1% Formic acid in Water

B: 0.1% Formic acid in Acetonitrile

Gradient:	Time (min)	% B
	0	5
	0.7	5
	0.8	10
	3.5	25
	5	40

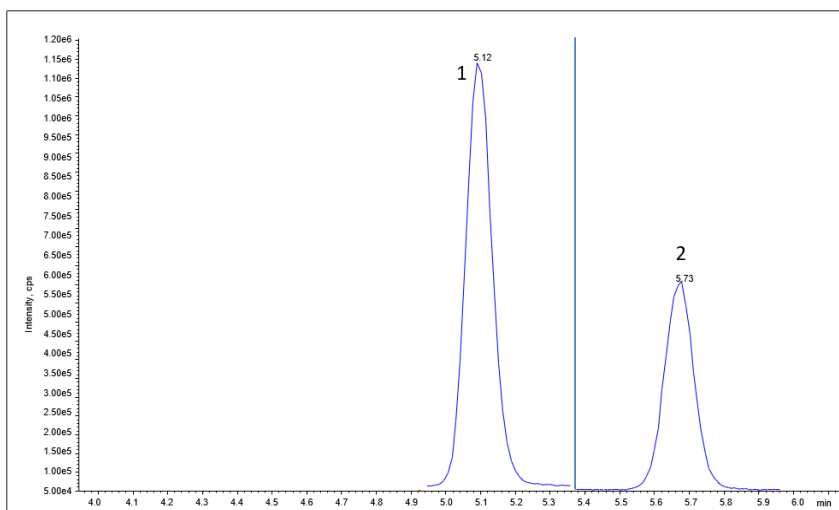
Flow Rate: 0.2 mL/min

Injection Volume: 5 µL

Detector: SCIEX API 4500™

Sample: 1. Uracil
2. 5-Fluorouracil

Figure 1. Separation of Uracil and 5-Fluorouracil using a Kinetex 2.6 µm PS C18 LC Column



App ID 25590

APPLICATIONS

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