HPLC Application

ID No.: **20586**

Underivatized MMA and Succinic Acid in Human Urine on Gemini C18, 3u, 100x3 mm

Column: Gemini® 3 µm C18 110 Å, LC Column 100 x 3 mm, Ea
Dimensions: 100 x 3 mm ID
Order No: 00D-4439-Y0
Elution Type: Gradient
Eluent A: 0.1% Formic Acid in DI H2O
Eluent B: 0.1% Formic Acid + 10 mM Ammonium Formate in MeOH

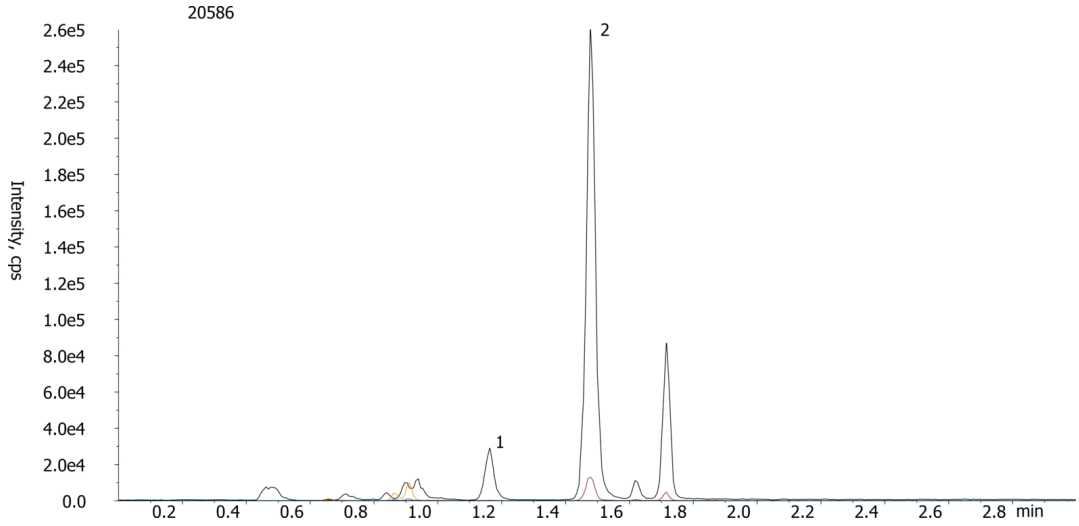
Gradient Profile:

Step No.	Time (min)	Pct A	Pct B
1	0	85	15
2	1.5	5	95
3	2.5	5	95
4	2.51	85	15
5	4.5	85	15

Flow Rate: 700 µL/min
Col. Temp.: 40 °C
Detection: Tandem Mass Spec (MS-MS) @ (ambient)
Detector Info: <a target="_blank" href="https://sciex.com/products/mass-spectrometers?utm_campaign=2019%20application%20search&utm_source=phenomenex&utm_medium=referral">SCIEX<,
Analyst Note: SecurityGuard™ Guard Cartridge System extends column lifetime.

- SecurityGuard Cartridges, Gemini C18 4 x 2.0mm ID, 10/Pk Part No.: AJ0-7596
- Holder Part No.: KJ0-4282

Products used in this application:



ANALYTES:

1 Succinic acid
Retention Time: 1.16 min

2 Methylmalonic acid
Retention Time: 1.48 min

Sample Preparation Details

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PRODUCT DESCRIPTION:

Strata™-X-AW 33 µm Polymeric Weak Anion, 30 mg / 1 mL, Tubes , 100/Pk

Order No.: 8B-S038-TAK

SOLID PHASE EXTRACTION (SPE) PRODCEDURE:

Note: The solvent volumes shown below are for a 30 mg bed mass.
The solvent volumes will need to be adjusted for a smaller or larger bed mass.

Condition:

Load:

Into individually labeled 1.5 mL conical micro-centrifuge tubes combine 0.5 mL 25 mM Ammonium formate, 50 uL IS and 100 uL blank, standard, or sample

Wash:

Dry:

Dry under high vacuum for 5-10 min

Elute:

Final Prep and Analysis:

This method is for the analysis of underivatized MMA.
Inject: 10 µL on HPLC Tandem Mass Spec (MS-MS) @ (ambient)

ANALYTES:	Spiked Conc. (ng/mL)	Log P	pKa	% Rec	%RSC (n=0)
1 Succinic acid	0				
2 Methylmalonic acid	0				

Note: *This method is designed as a convenient starting point for further investigation and can be tailored to meet your extraction goals. Call your local Phenomenex Representative for assistance in method development and optimization techniques.*