# **HPLC Application**

ID No.: 20586



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

Gemini® 3 µm C18 110 Å, LC Column 100 x 3 mm, Ea

100 x 3 mm ID **Dimensions:** Order No: 00D-4439-Y0 Elution Type: Gradient

Eluent A: 0.1% Formic Acid in DI H2O

0.1% Formic Acid + 10 mM Ammonium Formate in MeOH Eluent B:

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



Products used in this application:



Flow Rate:  $700 \mu L/min$ 

Col. Temp.: 40 °C

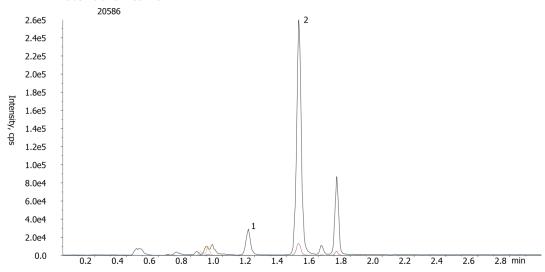
**Detection:** Tandem Mass Spec (MS-MS) @ (ambient)

**Detector Info:** <a target="\_blank"

href="https://sciex.com/products/mass-spectrometers?utm\_campaign=2019%20application%20search&utm\_source=phenomenex&utm\_medium=referral">SCIEX<SecurityGuard \*\* Guard Cartridge System extends column lifetime. **Analyst Note:** 

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





## **ANALYTES:**

Succinic acid

Retention Time: 1.16 min Methylmalonic acid Retention Time: 1.48 min

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# Sample Preparation Details for HPLC Application ID No.: 20586



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

### **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.

ondition:
pad:
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 samp
ash:
ry:
Dry under high vacuum for 5-10 min
ute:
nal 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.	Log P	pKa	% Rec	%RSC
	(ng/mL)				(n=0)
1 Succinic acid	0				
2 Methylmalonic acid	0				

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.

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