

CLICK ON THE UNDERLINED BLUE TEXT FOR DETAILS ON THE PRODUCTS USED IN THIS APPLICATION

UPLC CONDITIONS

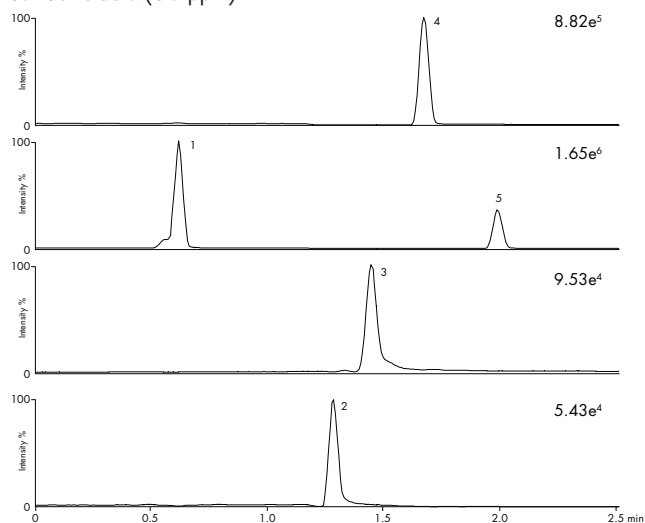
Column:	ACQUITY BEH Amide, 2.1 x 100 mm, 1.7 µm
Part Number:	186004801
Mobile phase A:	50/50 MeCN/H ₂ O with 10 mM CH ₃ COONH ₄ , pH 9.0
Mobile phase B:	95/5 MeCN/H ₂ O with 10 mM CH ₃ COONH ₄ , pH 9.0
Gradient Flow Rate:	0.6 mL/min
Injection Volume:	5.0 µL
Column Temp:	50 °C
Sample Temp:	5 °C
Strong/Weak needle wash:	95/5 MeCN/H ₂ O
Seal wash:	10/90 MeOH/H ₂ O
Instrument:	ACQUITY UPLC and TQD
Gradient:	Time
	(min) %A %B
	Initial 0.1 99.9
	0.4 0.1 99.9
	0.5 40.0 60.0
	2.0 70.0 30.0
	2.01 0.1 99.9
	5.0 0.1 99.9

MS CONDITIONS

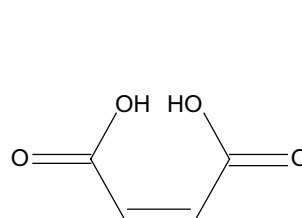
Instrument:	ACQUITY TQD
Ionization Mode:	ES ⁻
Superscript the -Capillary:	4.0 kV
Cone Voltage:	-25 V
Collision Energy:	10 eV
Extractor:	3 V
RF Lens:	0.1 V
Source Temp:	130 °C
Desolvation Temp:	350 °C
Desolvation Gas:	650 L/hr
Cone Gas:	0 L/hr
Collision Gas:	0.1 mL/min
MRM condition:	Pyruvic acid: 86.92 > 42.9
	Lactic acid: 88.92 > 42.9
	Succinic acid: 116.93 > 72.9
	Maleic and Fumaric acid: 114.88 > 70.9

COMPOUNDS

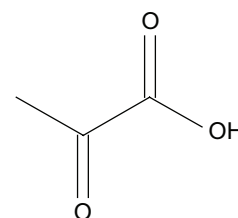
1. Maleic acid (1 ppm)
2. Pyruvic acid (50 ppm)
3. Lactic acid (50 ppm)
4. Succinic acid (50 ppm)
5. Fumaric acid (50 ppm)



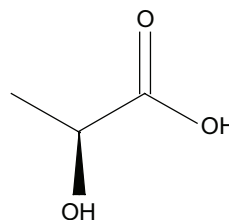
STRUCTURES



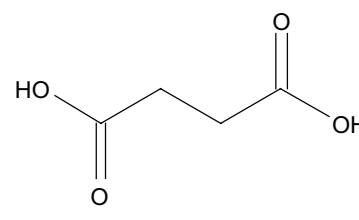
Maleic Acid



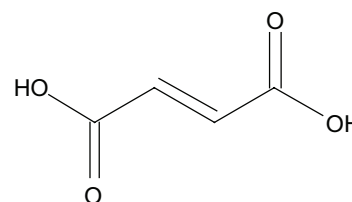
Pyruvic Acid



Lactic Acid



Succinic Acid



Fumaric Acid