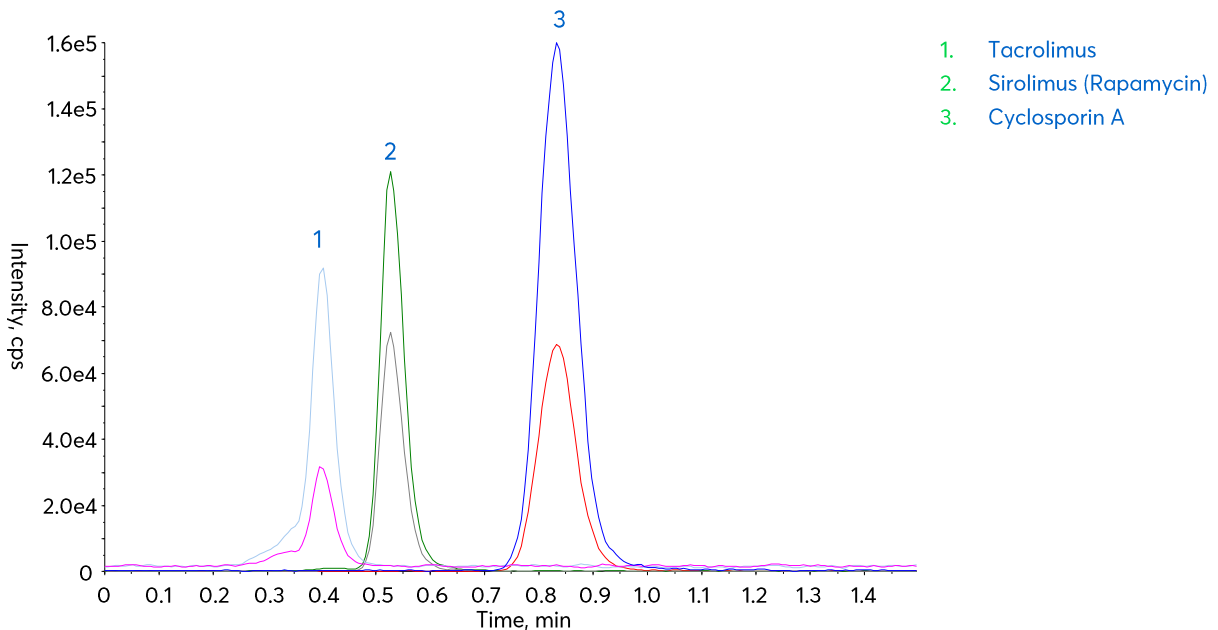


Application note #7490

Fast LC-MS/MS Immunosuppressant Separation Using Avantor[®] ACE[®] HTP-MS Column



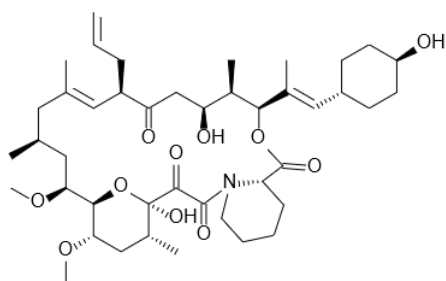
Method Details

CONDITIONS

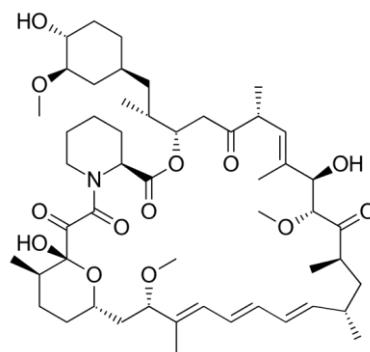
Column:	Avantor® ACE® HTP-MS
Particle Size:	2 µm
Dimensions:	10 x 2.1 mm
Mobile Phase:	10 mM ammonium formate in H ₂ O/MeCN (46:54 v/v)
Flow Rate:	0.4 mL/min
Injection:	0.1 µL
Temperature:	80 °C
Detection:	Sciex QTRAP® 6500+ LC-MS/MS system.

Ionisation mode: ESI, positive mode; Source temperature: 350 °C; Curtain gas: 33 psig; Ionspray™ source voltage: 5500 V; Ion source gas 1: 30 psig; Ion source gas 2: 70 psig.

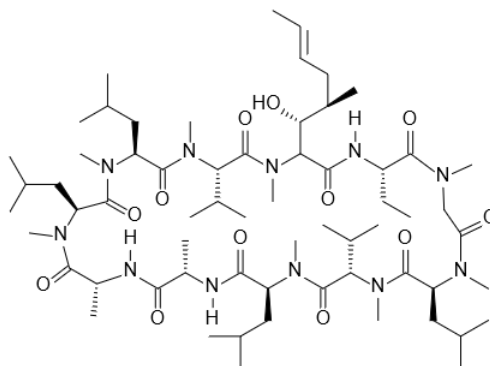
Sample: Mixture containing tacrolimus (10 ng/mL), sirolimus (42 ng/mL) and cyclosporin A (277 ng/mL) in 10 mM ammonium formate in H₂O/MeCN (46:54 v/v).



1. Tacrolimus



2. Sirolimus



3. Cyclosporin A

MRM TRANSITIONS

Analyte	MRM	Optimised MS Parameters		
		Declustering potential (V)	Collision energy (V)	Cell exit potential (V)
Tacrolimus	+821.3 amu → +768.4 amu	56	27	42
	+821.3 amu → +786.3 amu	56	23	42
Sirolimus (Rapamycin)	+931.4 amu → +864.4 amu	76	23	48
	+931.4 amu → +882.4 amu	76	17	46
Cyclosporin A	+1219.7 amu → +1184.6 amu	1	47	50
	+1219.7 amu → +425.1 amu	1	73	28

ORDERING TABLE

Product	Details	Size	Part Number
Avantor® ACE® HTP-MS Starter Kit	Fast Analysis LC-MS column (Holder + Cart)	10 x 2.1 mm	ACE-HTP-SK1
Acetonitrile	VWR HiPerSolv CHROMANORM® for LC-MS	2.5 L	83640.320
Water	VWR HiPerSolv CHROMANORM® for LC-MS	2.5 L	83645.320
Ammonium formate	VWR HiPerSolv CHROMANORM® for LC-MS	100 g	84884.180