

Supplementary information: Improvement of biomolecular analysis in thin films using in-situ matrix enhanced Secondary Ion Mass Spectrometry

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Supplementary Table 1. Parameters used for the measurements done in the RapiFlex instrument.

	Positive Mode		Negative Mode	
	Linear	Reflector	Linear	Reflector
Laser repetition rate, Hz	100	200	100	200
Linear detector voltage, kV	2.7		2.782	
Reflector detector voltage, kV		2.746		2.835
Number of laser shots	3000			
Ion source voltage 1, kV	20	20	20	19.98
Ion source voltage 2, kV	18.2	17.4	18.33	17.38
Lens voltage, kV	13	11.5	7.5	11.5
Reflector voltage 1, kV		20.85		20.85
Reflector voltage 2, kV		1.085		1.085
Reflector voltage 3, kV		8.7		8.65
Sampling Rate, GS/s	1.25	0.63	1.25	0.63
Pulsed Ion Extraction delay, ns	500	110	0	160
Matrix suppression	deflection			

Supplementary Table 2. Voltage settings for Sciex 4800+ instrument during MS/MS spectral acquisition.

Voltage, kV	Value
Source 1 focus	4.300
Source 1 lens	3.400
Y1 Deflector	0.085
X1 Deflector	0
Y2 Deflector	0.045
X2 Deflector	0.050
Lens 1	2.600
CID Lens (Lens 2)	4.000
Deceleration stack	6.300
Collision cell	7.000
Source 2	15.000
Lens 3	0.5000
Mirror 1	10.265
Mirror 2	17.829
Reflector detector	2.190
Combined precursor	1.725
Final detector voltage	1.883