Atmospheric pressure photoionization of peptides studied by mass spectrometry

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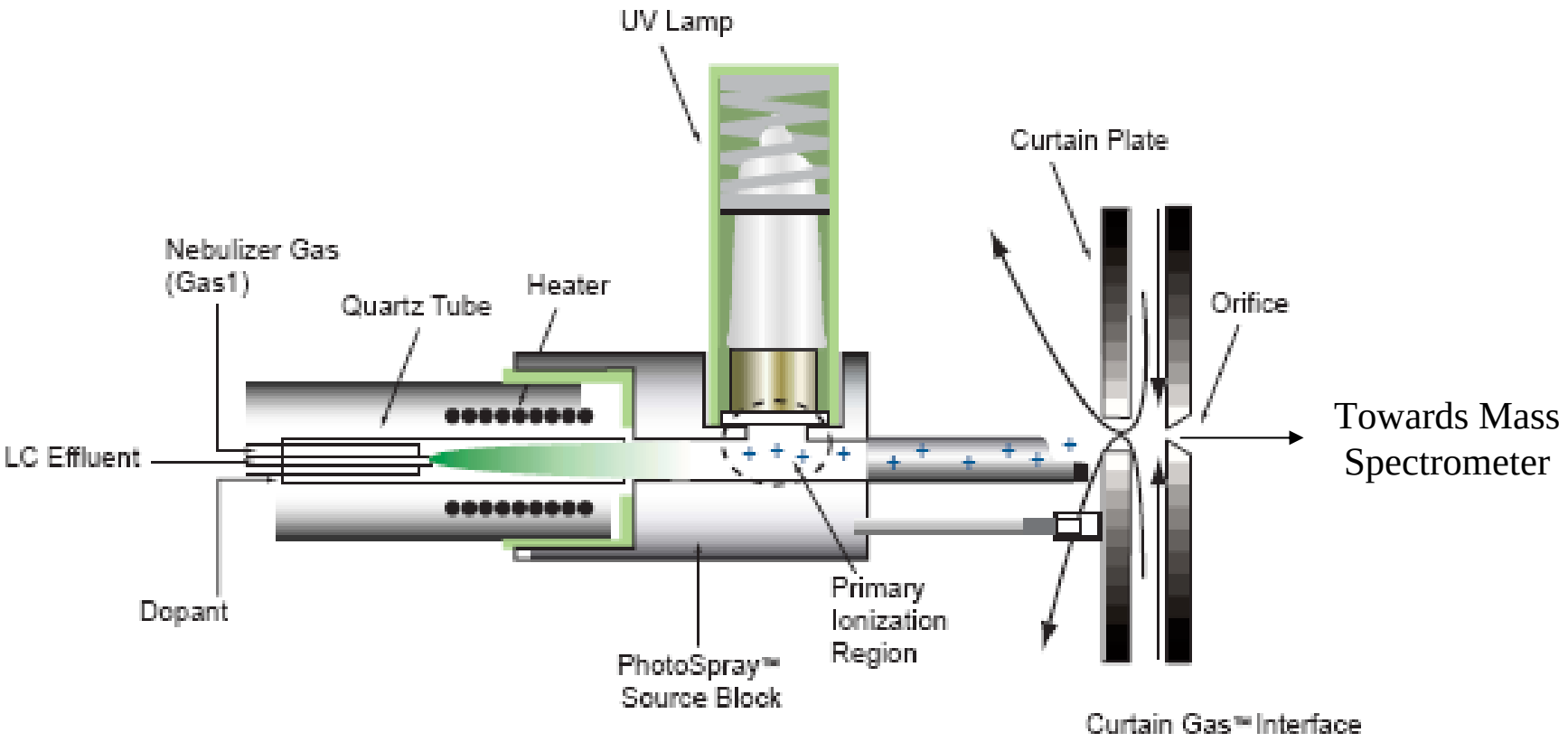
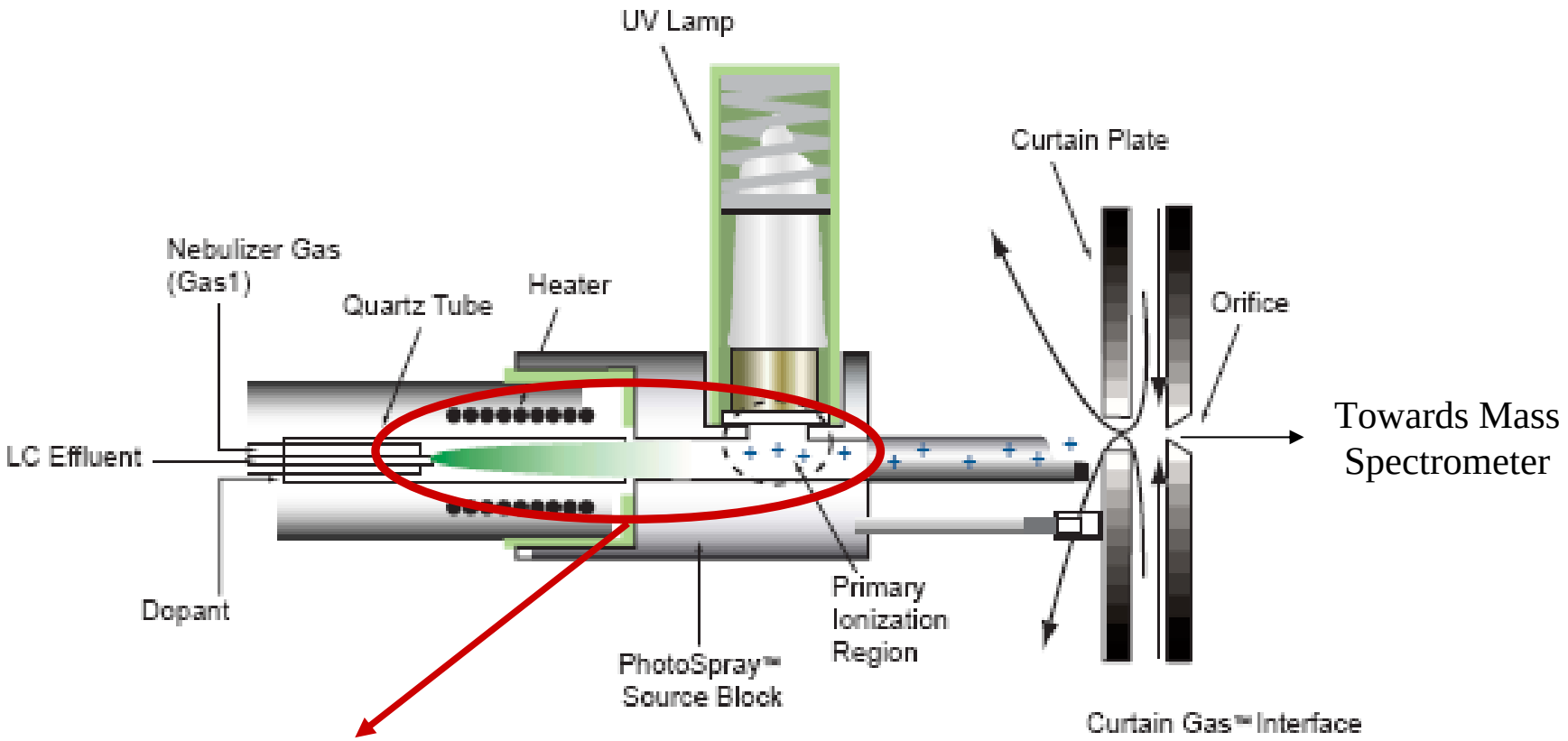
The Atmospheric Pressure Photoionisation Source - Sciex™



Robb, D.B. ; Covey, T.R. ; Bruins, A. P., *Anal. Chem.*, 2000, **72**, 3653-9

The Atmospheric Pressure Photoionisation Source - Sciex™

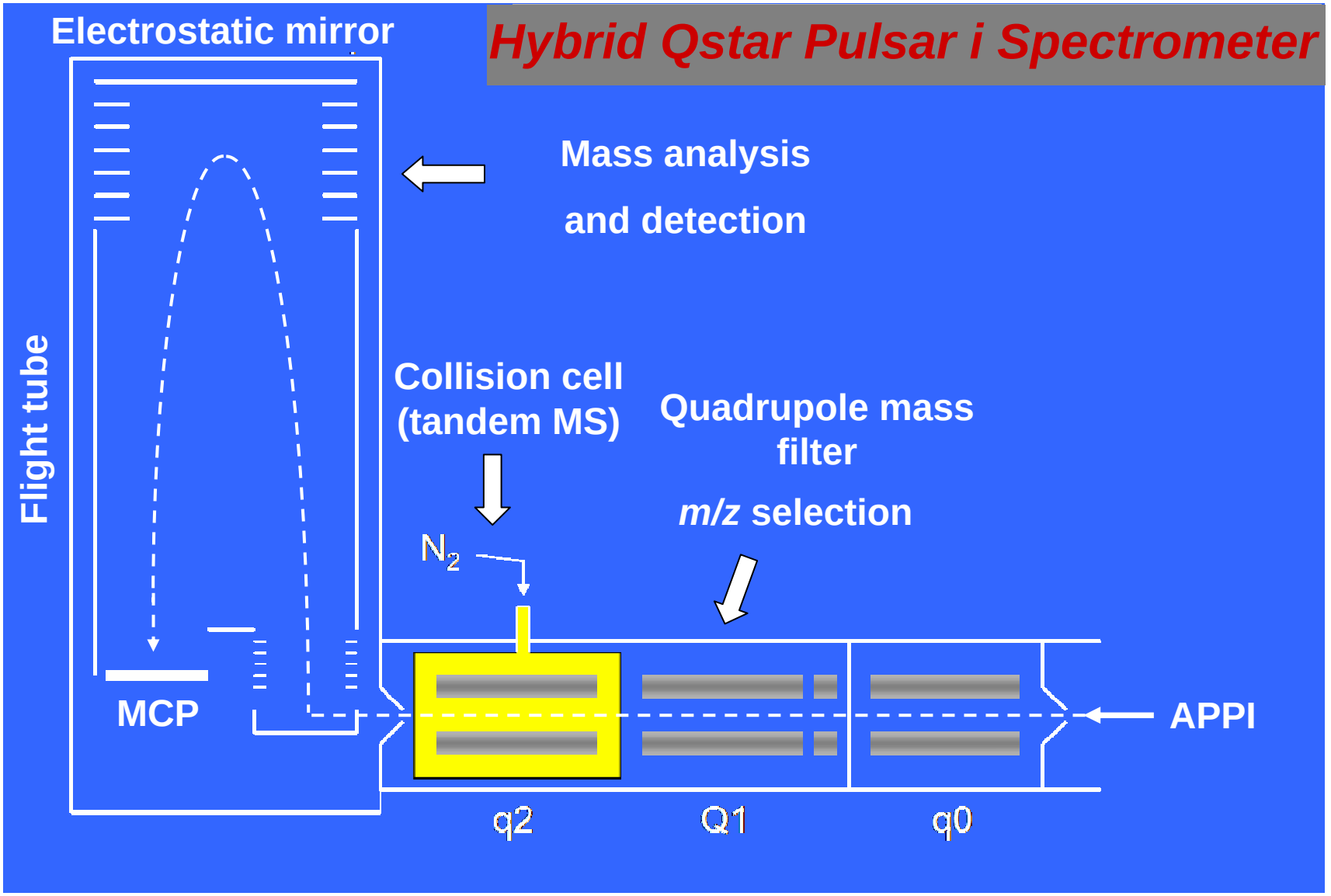


Photoionisation at 10 eV (Kr discharge lamp) on a spray

➔ may vary from a “mist” to a gas phase.

➔ dense medium and high pressure compared to usual gas phase photoionisation experiments.

➔ samples are solvated in the ionisation region

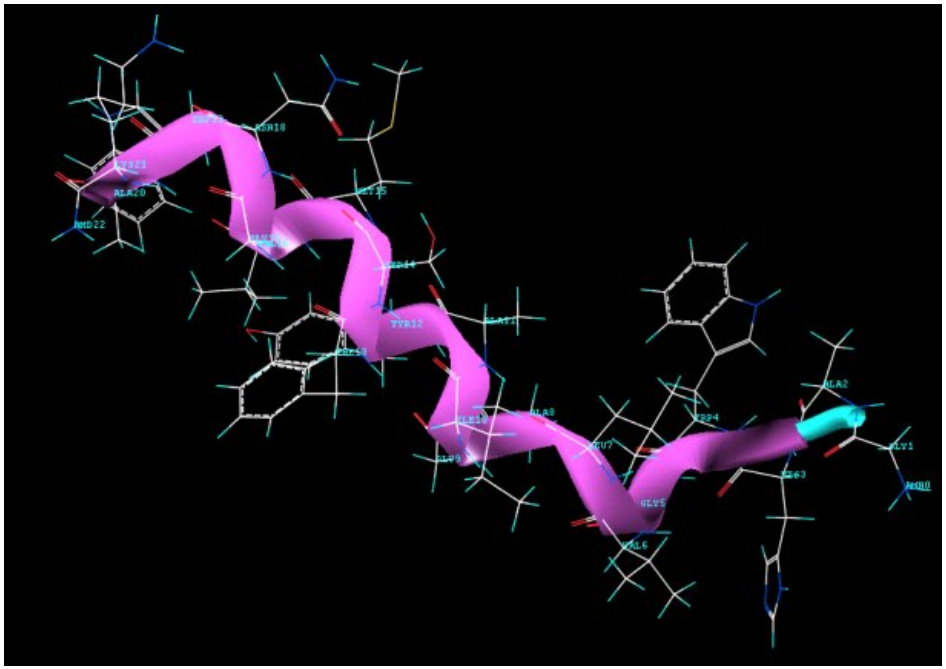

Hybrid Qstar Pulsar i Spectrometer
Electrostatic mirror
Flight tube
Mass analysis
and detection
Collision cell
(tandem MS)
Quadrupole mass
filter
m/z selection
N2
MCP
APPI
q2
Q1
q0

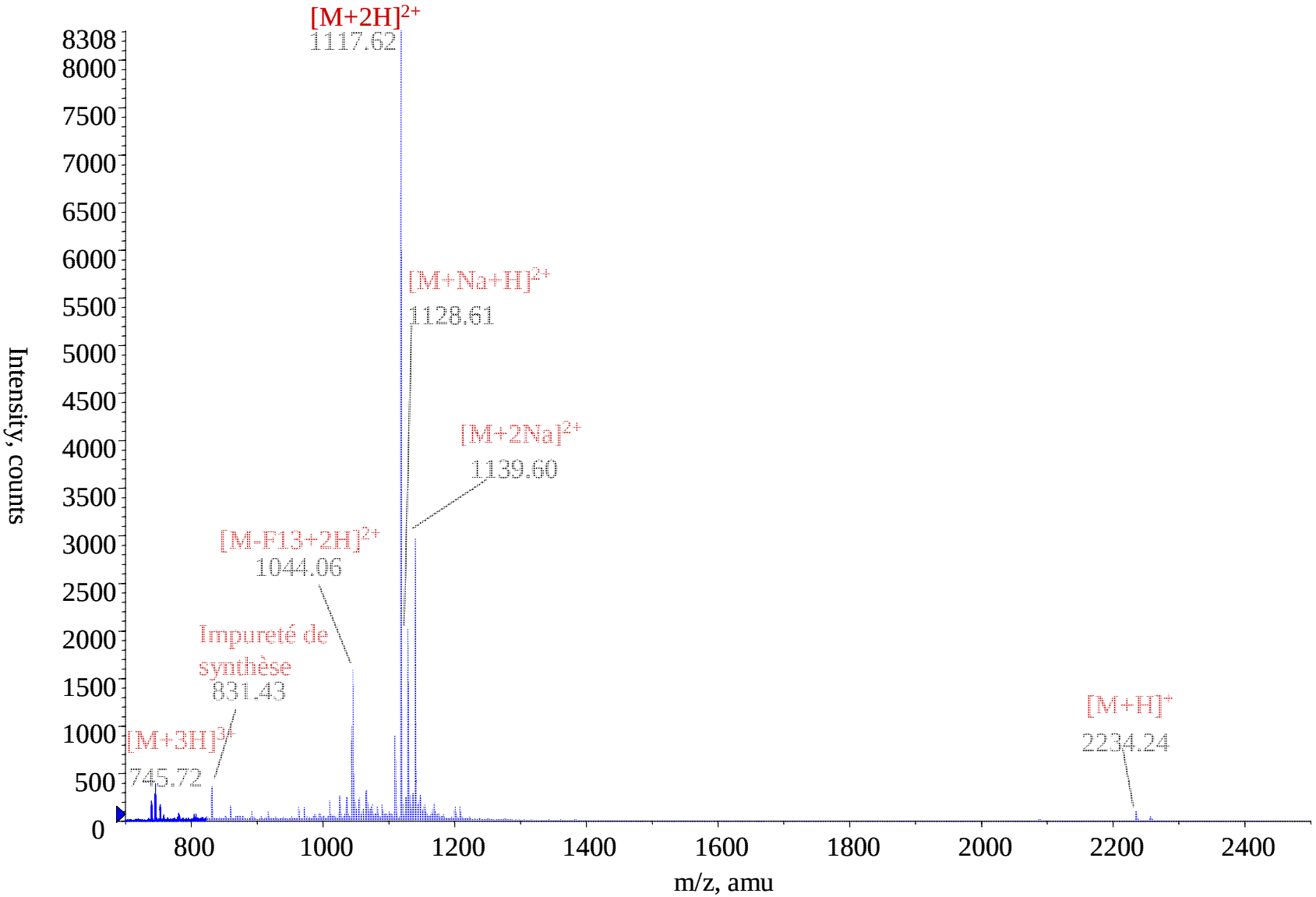
Photoionisation of peptides

Peptide E1: Transmembrane fragment of a hepatitis C virus protein

GAHWGVLAGIAYFSMVGNWAK-NH_2

Monoisotopic Mass : 2233,13 Da




[M+2H]2+
1117.62
[M+Na+H]2+
1128.61
[M+2Na]2+
1139.60
[M-F13+2H]2+
1044.06
Impureté de synthèse
831.43
[M+3H]3+
745.72
[M+H]+
2234.24
Intensity, counts
m/z, amu
8308
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
800
1000
1200
1400
1600
1800
2000
2200
2400