

270 μA

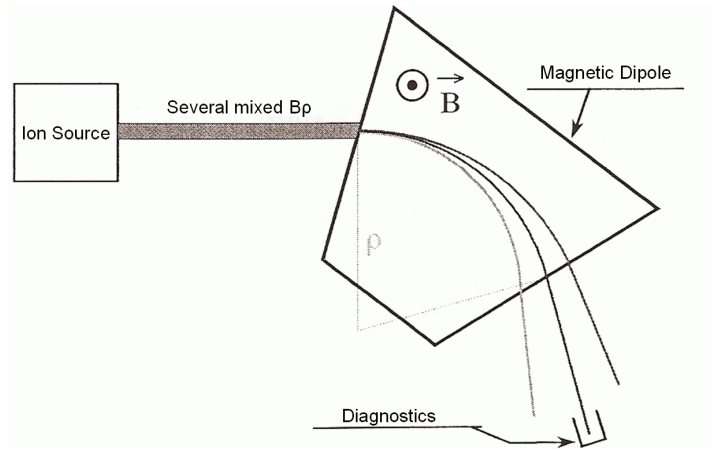
Exercise 1: Analyze the spectrum

Voltage of 10 kV has been used. Dipole magnets is used for the q/m selection.

Bending radius of dipole is 500 mm.

Hint: Dipole current of 60 A produces the dipole field of 0.0523 T.

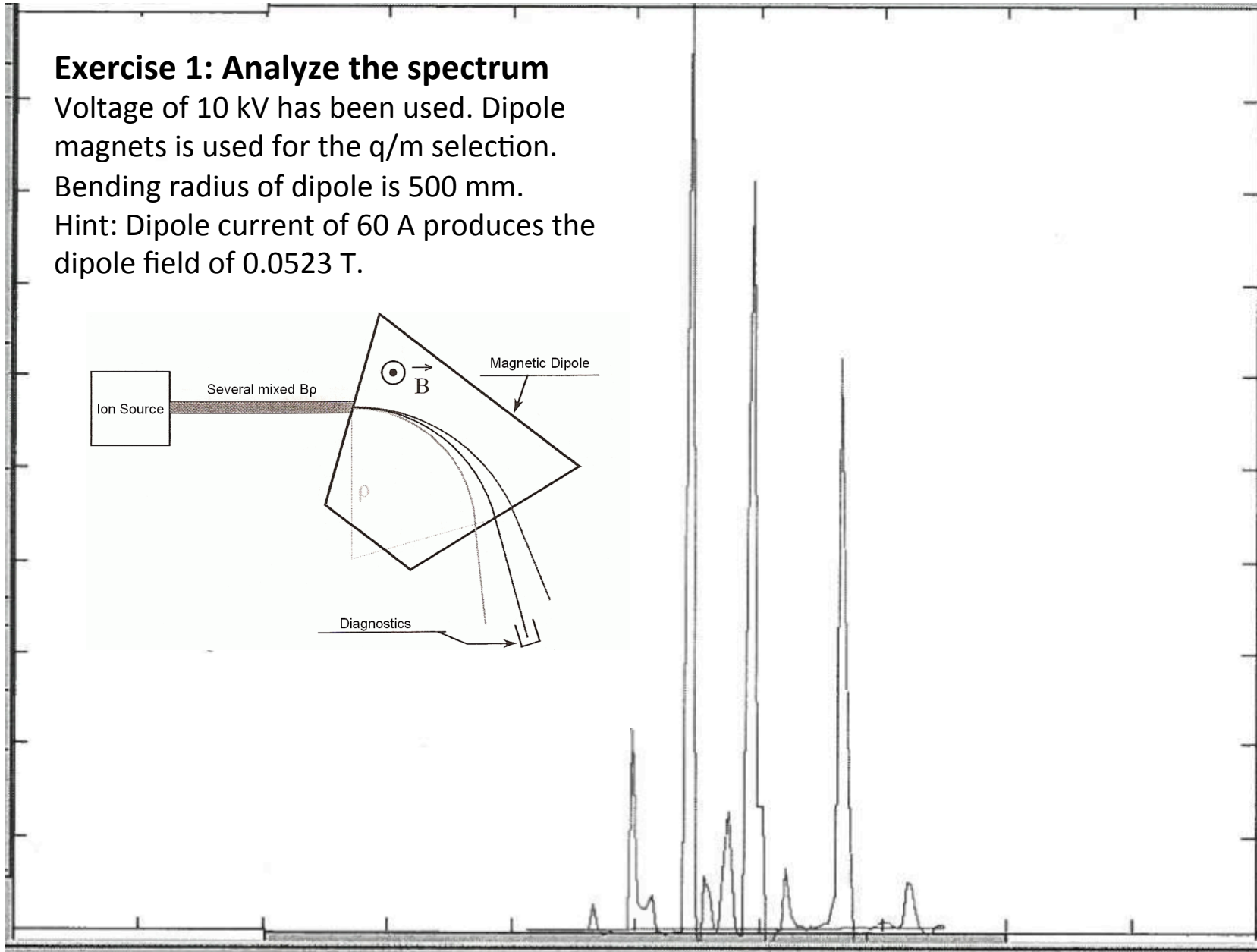
Intensity [μA]



0 A

Dipole current [A]

100 A



Exercise 2 a:

Project A needs electron gun having following specifications:

Current: 1 mA

Energy: 1 keV

Maximum available power: 1.5 W

Choose/define the electron gun meeting these requirements. Justify your choice!