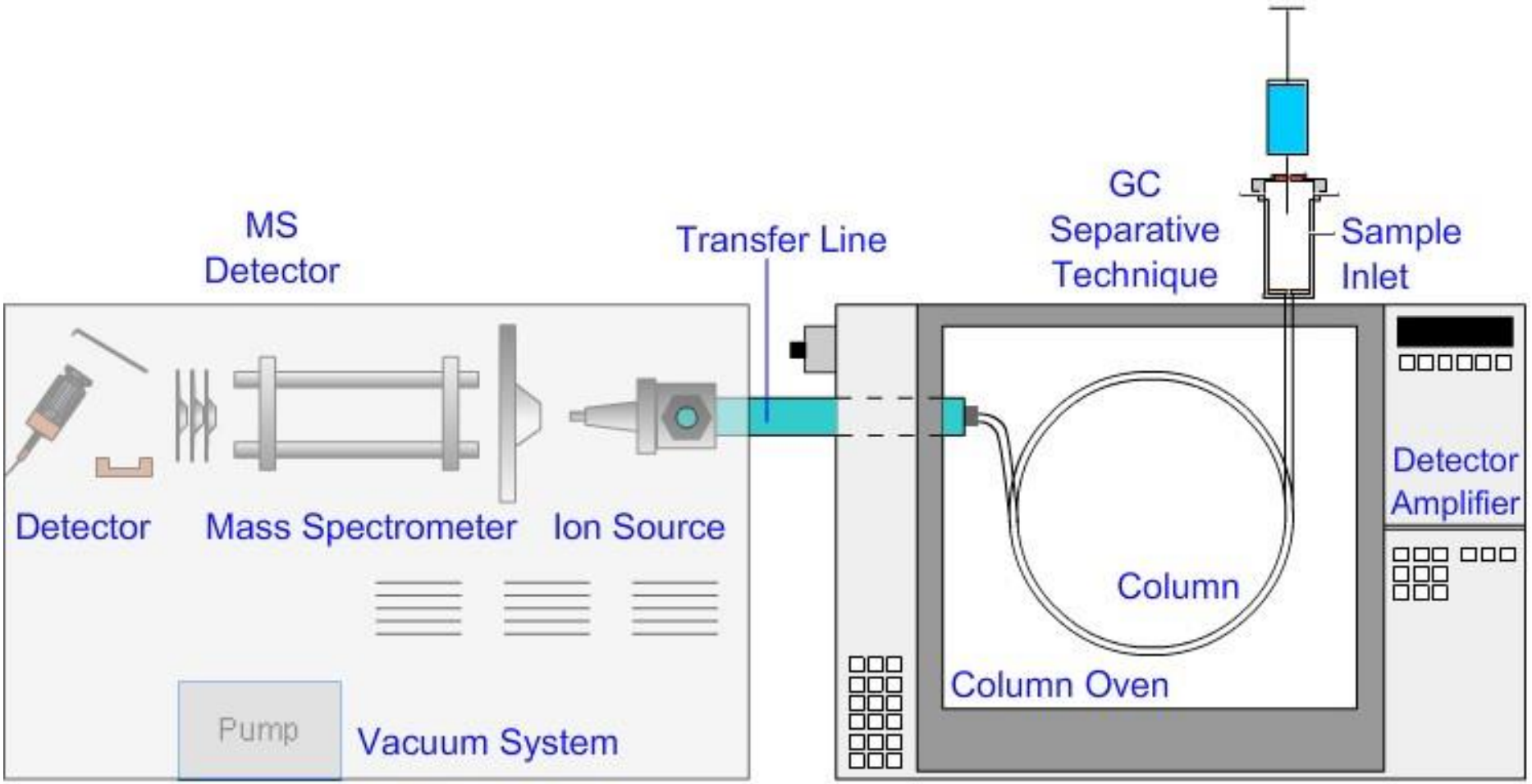
Chemistry 3403 Exp: GC-MS

Goals:

1. **Familiarization with GC-MS.**
2. **To interpret data acquired from the GC-MS.**
3. **To identify the natural abundances of the major isotopes of chlorine and bromine.**

GC-MS Schematic



Reference: http://www.chromacademy.com/Electron_Ionization_for_GC-MS_Essential_Guide.html

MS Components:

Ion source: Electron Impact.

NOTE: Must use caution to not overload ion source.

Mass selector: Quadrupole

Detector: Capable of detecting charged ions.

Sample:

5000-7000 ppm stock solution in DCM.

Sample 1 and 2 contain 5 compounds.

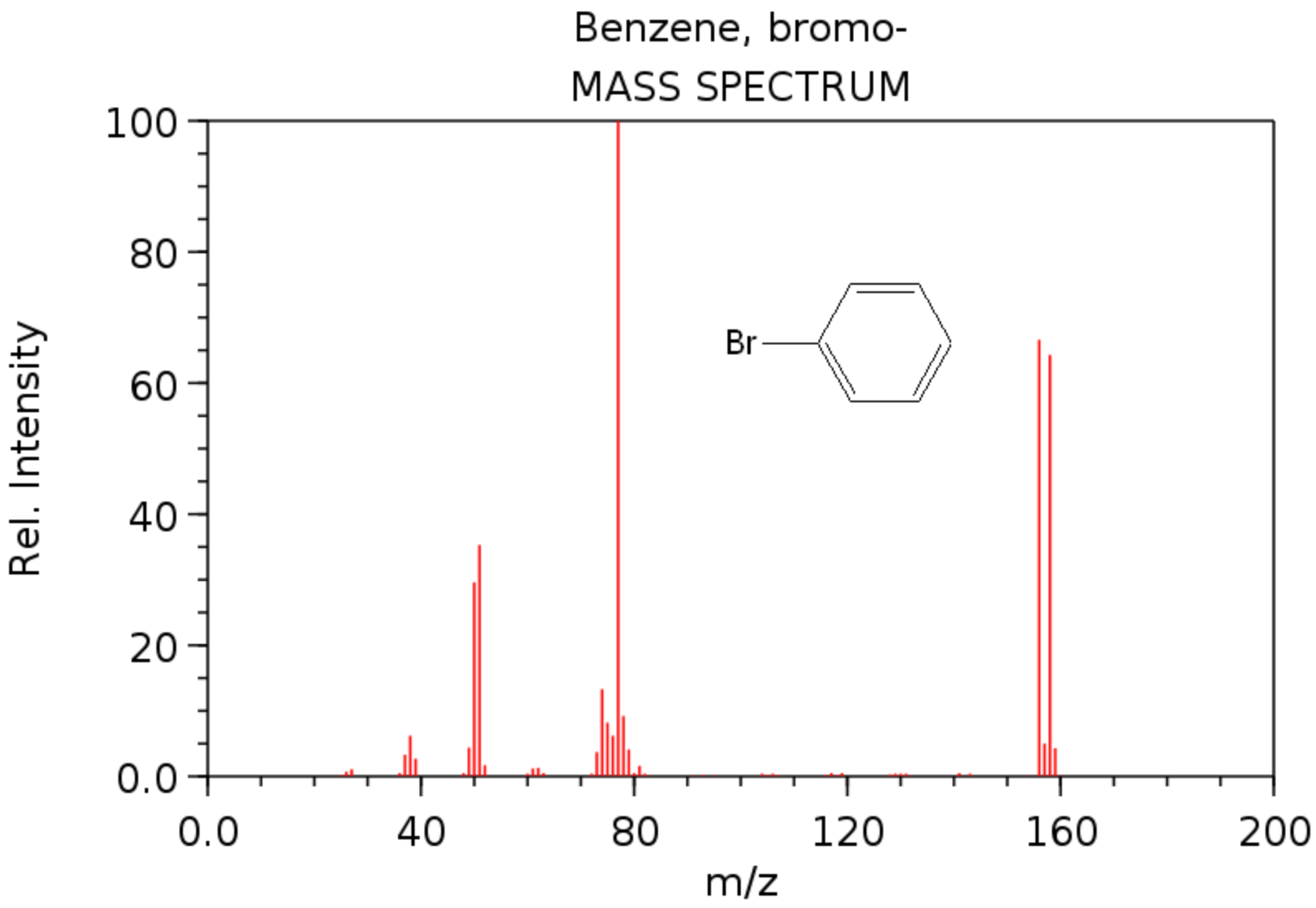
Must prepare a 1/100th dilution.
Know how to prepare this solution.

Will use small sample sizes and gradually increase.

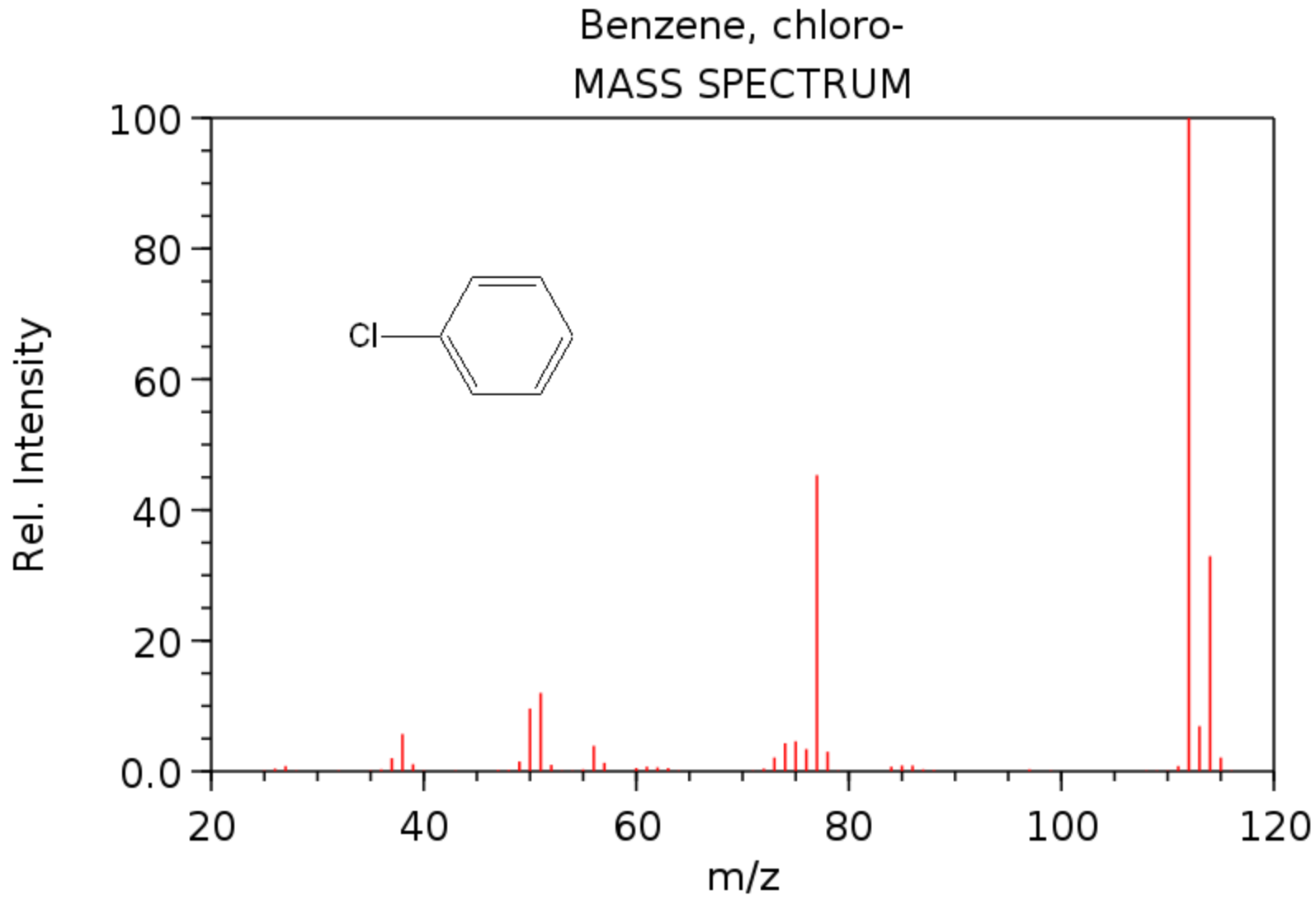
Will adjust injection volume and split ratio.

Isotopic Abundancy:

Bromine	Atomic Mass(amu)	% Abundance
79-Br	78.918338	50.69
81-Br	80.916291	49.31
Chlorine		
35-Cl	34.968853	75.78
37-Cl	36.965903	24.22



NIST Chemistry WebBook (http://webbook.nist.gov/chemistry)



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