



**Define and differentiate between the following:**

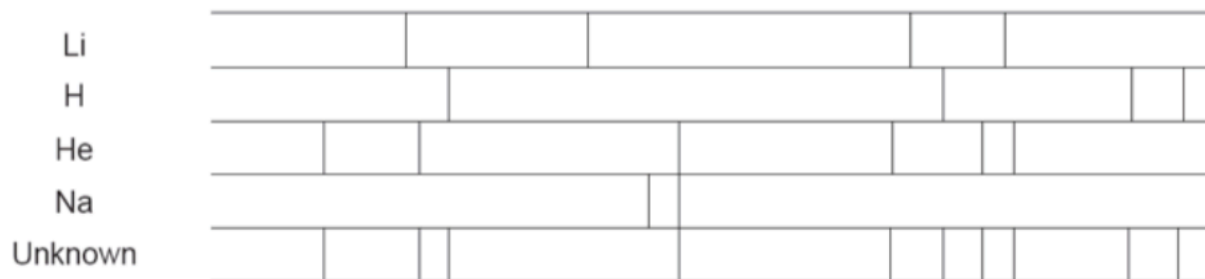
- Continuous spectrum
- Absorption spectrum
- Emission spectrum

**Draw an example of each.**

- Continuous spectrum
- Absorption spectrum
- Emission spectrum



Below are the emission spectra of four elements and the spectrum of an unknown sample of gas.



1. What elements are found in the unknown sample?
2. How were you able to exclude the other elements not present in the unknown sample?
3. Young stars contain a large amount of hydrogen and a small amount of helium and other elements. Could this be the spectrum of a young star? Why or why not?

Complete the following emission spectra data table using your spectrometer.

Source 1:

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**R O Y G B I V**



Source 2:



**R O Y G B I V**

Source 3:



**R O Y G B I V**

**Predict the absorption spectra of one of your observations above.**

Absorption spectra of \_\_\_\_\_



**R O Y G B I V**