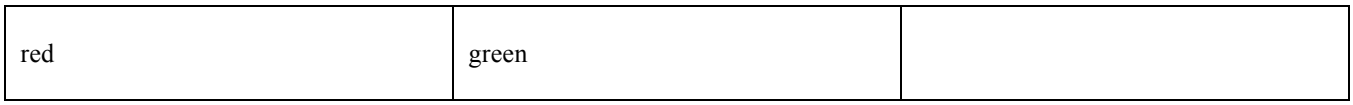
Experiment 21-Light Emission & Spectroscopy
DATA SHEET

Name: _____

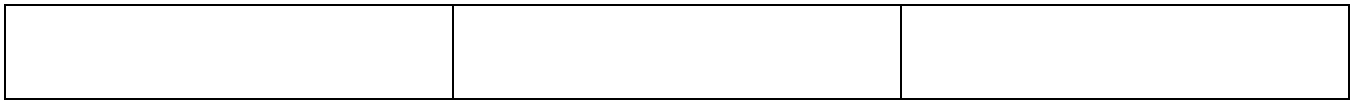
Table: _____ Section: _____

A. Continuous Spectra Key

No Filter

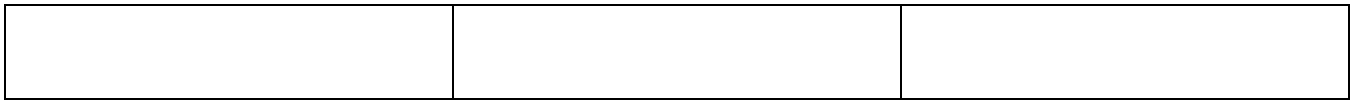


Red Filter

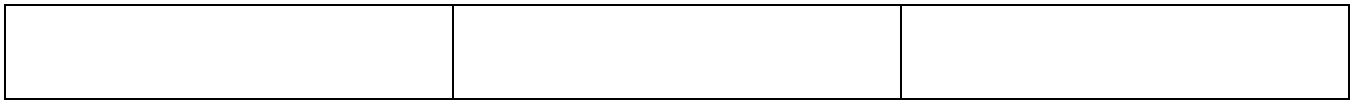


Blue Filter

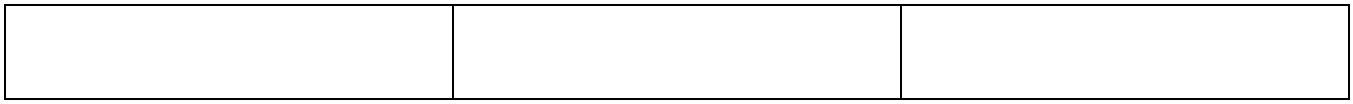
Green Filter



Yellow Filter



Sunglasses

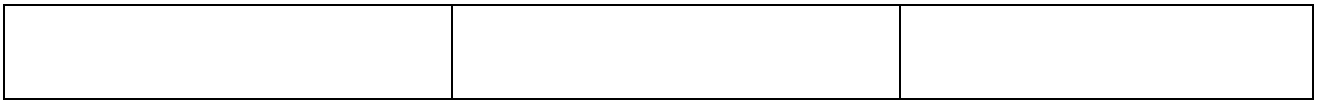


Experiment 21
DATA SHEET

B. Line Spectra of Gases

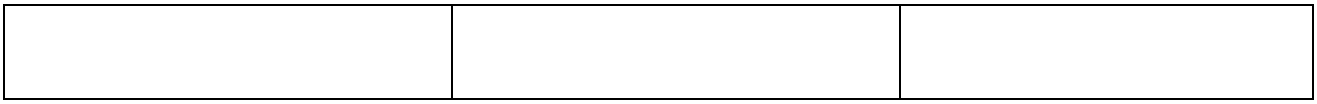
First Known Element

Element Name: _____



Second Known Element

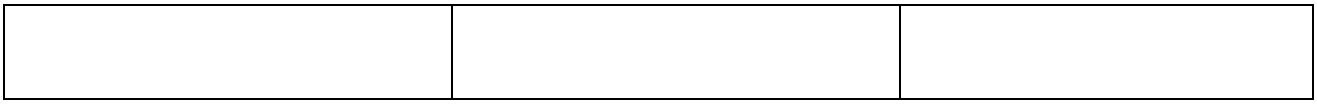
Element Name: _____



Unknown Element

Element Number: _____

Your Guess of Element's Identity: _____



QUESTIONS

1) Describe the source of the continuous spectra of light.

2) Indicate the portion of the spectrum removed by each of the filters inserted between the light and the spectroscope.

3) Sunglasses should remove the blue-violet and ultraviolet portion of sunlight which is most dangerous to our eyes. How effective were your sunglasses in reducing violet light? What color lenses would be most effective?

4) What is a spectroscope (or spectrometer) and what does it do?

5) Which has a higher frequency, red or blue light? Which has a longer wavelength?

6) What experimental method would you suggest to support the claim that iron exists in the gases in the sun?

7) Why don't the gases in your tubes finally "run out" of excited atoms and produce dimmer and dimmer light?