## Emission Spectra Data Sheet

## PART A. Emission Spectra of Gases

Describe the color(s) observed for each of the following light sources with the naked eye and through a diffraction grating (glasses) as viewed in the videos provided by your instructor.

|  |  |  |
| --- | --- | --- |
| **Light Source** | **Color(s) observed by the naked eye** | **Color(s) observed through the diffraction grating glasses** |
| **Candlelight** |  |  |
| **Incandescent (Tungsten) bulb** |  |  |
| **Helium** |  |  |
| **Hydrogen** |  |  |
| **Neon** |  |  |
| **Nitrogen** |  |  |
| **Mercury** |  |  |
| **Krypton** |  |  |

PART B. Flame Tests of Metals

Known Solutions

Describe the color of the salt solutions of these salts in a flame as viewed in the videos provided by your instructor.

|  |  |
| --- | --- |
| **Salt Solution** | **Color Observed when placed in the flame** |
| **Lithium (LiCl)** |  |
| **Sodium (NaCl)** |  |
| **Barium (BaCl2)** |  |
| **Strontium (SrCl­2)** |  |
| **Potassium (KCl)** |  |
| **Copper (CuCl2)** |  |
| **Calcium (CaCl2)** |  |

Unknown test solutions

Record your observations and predicted identity for the unknown solutions on the table below as viewed in the videos provided by your instructor. Each of the unknowns is one the knowns viewed earlier in Part B. Your instructor will provide you with the actual identity when she grades the post lab assignment.

|  |  |  |  |
| --- | --- | --- | --- |
| Unknown | Flame Color | Predicted Identity | Actual Identity |
| A |  |  |  |
| B |  |  |  |
| C |  |  |  |
| D |  |  |  |
| E |  |  |  |
| F |  |  |  |
| G |  |  |  |