



# Flame Tests

## Lab #4

When electrons in elements or ions are exposed to different forms of energy, they can absorb and emit photons of energy. Some of these emissions are visible to the human eye. The colors of these emissions are unique and specific to the particular ion absorbing the energy. By comparing known samples with unknowns, the identity of the unknowns can be determined.

### Materials:

Solutions Containing:

Barium chloride	Strontium chloride
Calcium chloride	Copper (II) chloride
Potassium chloride	Lithium chloride
Unknowns A, B and C	

Wooden Splints (already soaking the various solutions)

Bunsen Burner

### Procedure:

Obtain a wooden splint from each of the nine solutions. Make sure that these splints do not touch one another. Light the burner and place the splints, one at a time into the flame. Record the resultant color of the flame on your data table. Repeat any tests necessary to verify your results.

### Results:

From your results, identify the unknown solutions by comparing their flame tests with those of the unknowns.