GROUP 1: FLAME TESTS

1. a) potassium

   b) lithium and rubidium

   c) Compare the colour side-by-side with the flame colour produced by known lithium and rubidium compounds.

   d) (i) barium

      (ii) copper

2. The promoted electrons will lose energy again by falling back to lower energy levels. The energy released will depend on the energy gaps between the various orbitals, and this varies from element to element. Each energy jump downwards will be seen as a particular wavelength (or frequency) of light. That means that each element, with different gaps between the various energy levels, will produce a unique set of spectral lines, and so a unique flame colour.