

11 The halogens – Part 2 — Answers

Answers

Work through these after trying the questions yourself.

11.1 It increases down the group.

11.2 The ions get larger, so the outer electron is further from the nucleus and held less tightly, so it is given away (donated) more easily.

11.3 (a) white \ (b) cream \ (c) yellow.

11.4 The precipitate dissolves in dilute ammonia (silver bromide needs concentrated, and silver iodide does not dissolve).

11.5 Iodide is a much stronger reducing agent than chloride, so it reduces (is oxidised by) the sulfuric acid to form iodine; chloride is too weak a reducing agent to do this.

11.6 It is bromide, Br^- . A cream silver-halide precipitate is silver bromide, and silver bromide dissolves only in *concentrated* ammonia (silver chloride dissolves in dilute; silver iodide does not dissolve at all).