

## IGCSE Chemistry (9-1) Specification 2(g)

### **(g) Acids, bases and salt preparations**

#### **Students should:**

**2.34** know the general rules for predicting the solubility of ionic compounds in water:

- common sodium, potassium and ammonium compounds are soluble
- all nitrates are soluble
- common chlorides are soluble, except those of silver and lead(II)
- common sulfates are soluble, except for those of barium, calcium and lead(II)
- common carbonates are insoluble, except for those of sodium, potassium and ammonium
- common hydroxides are insoluble except for those of sodium, potassium and calcium (calcium hydroxide is slightly soluble)

**2.35** understand acids and bases in terms of proton transfer

**2.36** understand that an acid is a proton donor and a base is a proton acceptor

**2.37** describe the reactions of hydrochloric acid, sulfuric acid and nitric acid with metals, bases and metal carbonates (excluding the reactions between nitric acid and metals) to form salts

**2.38** know that metal oxides, metal hydroxides and ammonia can act as bases, and that alkalis are bases that are soluble in water

**2.39** describe an experiment to prepare a pure, dry sample of a soluble salt, starting from an insoluble reactant

**2.40C** describe an experiment to prepare a pure, dry sample of a soluble salt, starting from an acid and alkali

**2.41C** describe an experiment to prepare a pure, dry sample of an insoluble salt, starting from two soluble reactants

**2.42** practical: prepare a sample of pure, dry hydrated copper(II) sulfate crystals starting from copper(II) oxide

**2.43C** practical: prepare a sample of pure, dry lead(II) sulfate