

GCSE Chemistry - Tests You Need To Know Solutions

1. (a) Yellow-orange
 (b) Copper
 (c) Flame colours mix/blend
 (d) Bromide ion (Br^-)
 (e) Add barium chloride solution
 Add hydrochloric acid
 White precipitate produced

2. (a) Damp litmus paper bleached white
 (b) Use a fume cupboard or well ventilated room
 (c) $2\text{HCl} \rightarrow \text{H}_2 + \text{Cl}_2$

3. (a)

	Potassium chloride solution	Calcium nitrate solution	Ammonium sulfate solution	Water
Test with silver nitrate in the presence of dilute nitric acid	White precipitate	No change	No change	No change
Test with barium chloride in the presence of dilute hydrochloric acid	No change	No change	White precipitate	No change

- (b) Purple/lilac and red
 (c) Flame colours mix/blend

4. (a) The gas is carbon dioxide (CO_2) so the anion will be a carbonate (CO_3^{2-}).
 (b) Copper hydroxide, $\text{Cu}(\text{OH})_2$
 (c) $\text{Ba}^{2+}(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) \rightarrow \text{BaSO}_4(\text{s})$
 (d) Add silver nitrate solution and dilute nitric acid
 Chloride produces a white precipitate
 Bromide produces a cream precipitate
 Iodide produces a pale yellow precipitate

5. X is iron(II) sulphate, FeSO_4
 Y is sodium iodide, NaI
 Z is iron(III) bromide, FeBr_3