

IGCSE (EDEXCEL) Chemistry : Tests for cations answers

- Q1. Platinum, hydrochloric acid, colour, metal ions / cations
- Q2. Lithium red
Sodium yellow
Potassium lilac
Calcium orange-red
Copper blue-green
- Q3. Copper (II), Cu^{2+} blue
Iron (II), Fe^{2+} green
Iron (III), Fe^{3+} red-brown
Ammonium, NH_4^+ gives off ammonia gas

IGCSE (EDEXCEL) Chemistry : Tests for anions answers

- Q1. M1 add acid (to mixture of solids/solution)
M2 (pass / bubble) gas / carbon dioxide into limewater
M3 which goes cloudy / milky / white ppt forms
- Q2. M1 add (dilute hydrochloric/nitric) acid
M2 add barium chloride (solution) / barium nitrate (solution)
M3 white precipitate (if sulfate ions are present)
- Q3. M1. add silver nitrate / AgNO_3 (solution)
M2. chloride gives a white precipitate
M3. bromide gives a cream precipitate
M4. iodide gives a yellow precipitate
- Q4. It may react to give a sulphate, which will produce a white precipitate

IGCSE (EDEXCEL) Chemistry : Tests for gases / water answers

- Q1. M1 (damp) litmus paper / universal indicator M2 bleached
- Q2. Relights a glowing splint
- Q3. M1 bubble / pass / add the gas / carbon dioxide into limewater
M2 (limewater) turns cloudy / milky
- Q4. (squeaky) pop with lighted splint
- Q5. M1 test the gas with (damp) (red) litmus paper / (damp) universal indicator paper
M2 (litmus) turns blue / (universal indicator) turns blue / purple
- Q6. M1 Anhydrous CuSO_4 ,
M2 White to blue

IGCSE (EDEXCEL) Chemistry : Tests for cations 2 answers

- Q1. M1. Platinum wire M2. non-luminous flame
- Q2. M1. dip (platinum wire) in dilute Hydrochloric acid
M2. hold loop in flame until it burns with no colour
- Q3. M1. to remove any other ions / chemicals / impurities / contaminants / compounds / substances (that may be on the wire)
M2. (so that) they do not interfere with / mask the colour of the flame
- Q4. M1. add a few drops of sodium hydroxide
M2. blue precipitate of copper hydroxide forms
- Q5. green precipitate of Iron (II) hydroxide forms
- Q6. brown precipitate of Iron (III) hydroxide forms
- Q7. M1 add sodium hydroxide (solution) (and warm)
M2 test the gas with (damp) (red) litmus paper / (damp) universal indicator paper
M3 (litmus) turns blue / (universal indicator) turns blue / purple
(if ammonium ions are present)

IGCSE (EDEXCEL) Chemistry : Tests for anions 2 answers

- Q1. add nitric acid ... Halides
add dil. Hydrochloric acid Carbonates
add dil. Hal and Barium Chloride Sulphates
- Q2. Carbonate Carbon dioxide given off
Sulphate White precipitate
Chloride White precipitate
Bromide Cream precipitate
Iodide Yellow precipitate
- Q3. Any one from:
M1 (hydrochloric acid/it) contains chloride ions
M2 (hydrochloric acid/it) produces a (white) precipitate with silver nitrate
M3 (hydrochloric acid/it) reacts with silver nitrate
- Q4. To remove traces of carbonate or sulphate ions. (both will produce a precipitate)

IGCSE (EDEXCEL) Chemistry : Tests for gases / water 2 answers

- Q1. Chlorine bleaches damp litmus paper
Oxygen Relights a glowing splint
Carbon dioxide (limewater) turns cloudy / milky
Hydrogen (squeaky) pop with lighted splint
Ammonia damp red litmus turns blue
- Q2. M1. Measure b.p. or m.p., M2 100 degrees C or 0 degrees C
- Q3. M1 Anhydrous CuSO₄, M2 White to blue