

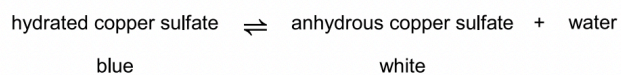
(Tests for anions (halides, sulfates, carbonates))

Q1. (2018)

This question is about copper sulfate.

Blue copper sulfate turns white when it is heated.

The word equation for the reaction is:



What name is given to hydrated copper sulfate in this reaction?

[1 mark]

Tick **one** box.

Catalyst

☐

Element

☐

Product

☐

Reactant

☐

Q2.(2018)

Complete the sentence.

[1 mark]

The colour change when water is added to anhydrous copper sulfate

is white to _____ .

A student heats 2.5 g of hydrated copper sulfate in a test tube.

0.9 g of water is given off.

The remaining solid is anhydrous copper sulfate.

Q3.(2018)

The compounds in fireworks also contain non-metal ions.

A scientist tests a solution of the chemicals used in a firework.

Silver nitrate solution and dilute nitric acid are added to the solution.

A cream precipitate forms.

Which ion is shown to be present by the cream precipitate?

[1 mark]

Q4.(2018)

Describe a test to show the presence of sulfate ions in the solution.

Give the result of the test if there are sulfate ions in the solution.

[3 marks]

Test _____

Result _____

Q5.(2019)

Scientists tested two water samples from the drinking water supply.

The scientists tested one sample for aluminium ions and the other sample for sulfate ions.

Draw **one** line from each ion to the compound needed to identify the ion.

[2 marks]

Ion	Compound needed to identify ion
	Barium chloride
Aluminium ion	Copper sulfate
	Silver nitrate
Sulfate ion	Sodium hydroxide
	Sulfuric acid

Q6.(2021)

Complete the sentence.

Choose the answer from the box.

[1 mark]

barium chloride solution	limewater
red litmus paper	silver nitrate solution

Sulfate ions can be identified using dilute hydrochloric acid

and _____.

Q7.(2022)

Complete the sentence.

Choose the answer from the box.

[1 mark]

brown	green	white
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The student tested sea water for chloride ions by adding nitric acid and silver nitrate solution.

The colour of the precipitate formed was _____.

Q8.(2024)

How could a sample of limestone be tested to show the presence of carbonate ions?

Complete the sentences.

Choose answers from the box.

[2 marks]

barium chloride	hydrochloric acid	limewater
sodium hydroxide	universal indicator	

The substance added to the limestone is _____.

The gas produced is identified using _____.