

Feb 27-5:19 AM

Qualitative analysis is used to separate and detect cations and anions in a sample substance

<http://chemistry.about.com/library/weekly/aa091001a.htm>

Most of the chemicals known are in the form MX

A diagram showing the chemical formula MX. A red arrow points from the 'M' to the text 'metal cation +'. A green arrow points from the 'X' to the text 'non metal anion -'. To the left is a colorful, abstract graphic with various symbols and letters.

Feb 27-5:22 AM

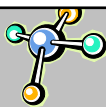
Qualitative testing is all about finding the types of substance present.

Most chemical tests are designed to find one type of ion. This is why they are often called semi qualitative tests

A diagram showing the chemical formula MX. A vertical red line is drawn under the 'M'. A green arrow points from the 'X' to the text 'non metal anion -'. To the right is a colorful, abstract graphic with various symbols and letters.

Feb 27-5:22 AM

## NEGATIVE ION TESTS



## 1. Carbonate + Sulphide test

Dissolve some of your white powder in distilled water.

Add 10 drops of hydrochloric acid

Is a colourless gas released?

If it has no smell .....your white powder contains carbonate

If it smells of bad eggs.....your white powder contains a sulphide

Mar 8-12:19 PM

## NEGATIVE ION TESTS

## 2. Chloride, Bromide and Iodide Test

Using a fresh sample of your unknown.  
add two drops of dilute nitric acid, then 5  
drops of silver nitrate solution.

White precipitate = chloride

Cream precipitate = bromide

Yellow precipitate = iodide



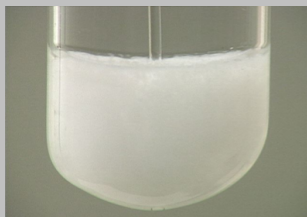
Mar 8-12:19 PM

## NEGATIVE ION TESTS

## 3. Sulphate Test

Using a fresh sample of your unknown.  
add 5 drops of barium chloride solution.

White precipitate = sulphate



Mar 8-12:19 PM


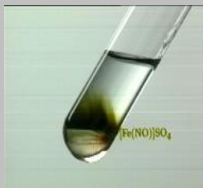
**NEGATIVE ION TESTS**

**4. Nitrate Test**

This test is dangerous and should be completed by your teacher

1. Make up some fresh unknown solution
2. add 2 drops of dilute sulphuric acid
3. add 2mL of iron sulphate solution
4. Add **concentrated** sulphuric acid slowly down the inside of the test tube

A **brown ring** will form if nitrate is present



Mar 8-12:19 PM

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