

EXPERIMENT NO. 14

Qualitative analysis

For each test you should record **all** your observations in the spaces provided.

Examples of observations include:

- colour changes seen;
- the formation of any precipitate and its solubility (where appropriate) in an excess of the reagent added;
- the formation of any gas and its identification (where appropriate) by a suitable test.

You should record clearly at what stage in a test an observation is made.

Where no change is observed you should write 'no change'.

Where reagents are selected for use in a test, the name or correct formula of the element or compound must be given.

If any solution is warmed, a boiling tube must be used.

Rinse and reuse test-tubes and boiling tubes where possible.

No additional tests should be attempted.

- (a) (i) **FA5, FA 6, FA 7 and FA 8** are all aqueous solutions. Each contains one anion and one cation.

Carry out the following tests and record your observations.

<i>tests</i>	<i>observations</i>			
	FA 5	FA 6	FA 7	FA 8
To a 1 cm depth of solution in a test tube add few drops of aqueous sodium hydroxide then in excess				
if no ppt formed then warm the mixture				
To a 1 cm depth of solution in a test tube add few drops of aqueous ammonia then in excess				

(b) Perform following tests to identify anions present in **FA 5**, **FA 6**, **FA 7** and **FA 8**.

<i>tests</i>	<i>observations</i>			
	FA 5	FA 6	FA 7	FA 8
To a 1 cm depth of solution in a test tube add 1 cm depth of aqueous silver nitrate then				
add aqueous ammonia				
To a 1 cm depth of solution in a test tube add 1 cm depth of aqueous barium chloride then				
add aqueous hydrochloric acid				

(c) Identify all ions present in **FA 5**, **FA 6**, **FA 7** and **FA 8** from your observations in **(a)** and **(b)**.

Write the formulae of the ions in Table.

	cations	anions
FA 5		
FA 6		
FA 7		
FA 8		