KAHUHO UHURU HIGH SCHOOL

FORM III END OF YEAR EXAM 2010

CHEMISTRY PRACTICALS

TIME

**INSTRUCTIONS**

* Read through all the questions before starting.
* Answer all the questions in the spaces provided.

1. You are provided with

* Aqueous sulphuric acid labeled solution A
* Solution B containing 8.0g per litre of sodium carbonate.
* You are required to determine the concentration of solution A.

**PROCEDURE**

Using a pipette, a place 25.0 cm3 of solution A into a 250ml volumetric flask Add distilled water to make 250cm of solution. Label this solution C. Place solution C in a burette. Clean the pipette and use it to place 25 cm of solution B in a conical flask. Add 2 drops of methyl orange indicate provided and titrate with solution C. Record your results in the table below. Repeat the titration two more times.

TABLE

|  |  |  |  |
| --- | --- | --- | --- |
|  | I | II | III |
| Final burette reading ( ) |  |  |  |
| Initial burette reading cm3 |  |  |  |
| Volume of solution D used (cm3) |  |  |  |

Calculate the:

1. average volume of solution D used (1 mark)
2. Concentration of sodium carbonate in solution

B(Na=23, O = 16, C = 12). (2 marks)

(iii) Moles of sodium carbonate used. (1 mark)

1. Concentration of sulphuric acid in sodium C (2 marks)
2. Concentration of sulphuric acid in solution A (2 marks)
3. You are provided with solid T which is a mixture . use it to carry out tests below. record your observations and inferences in the space provided
4. Place two spatula end full of solid Q in a boiling tube. Add 10cm3 of distilled water and shake.

Observation (1 mark)

1. Filter the mixture and retain the both filtrate and the residue.
2. To about 2cm3 of the filtrate, add sodium hydroxide solution drop wise.

Observation inference (1 mark)

1. To about 2cm3 of the filtrate add aqueous ammonia drop wise until in excess

Observation (2 marks) inference (1 mark)

1. To about 2cm3 of the filtrate add 2cm3 of sodium chloride.

Observation (1 mark inference (1 mark)

1. You are provided with solid Y

(a ) Take one spatula full of solid Y in a boiling tube. Add 10cm3 of distilled water and shake divide the solution into

Observation (1 mark)

1. To the first portion, add 3 drops of universal indicator and identify the PH.

Observation (1 mark) inference(1 mark

1. To the 2nd portion. Add half a spatula full of solid sodium carbonate

Observation(1 mark) inference (1 Mark)

1. To the 3rd portion add 3 drops of acidified potassium chromate (VI) solution and warm

Observation (1 mark) inference (1 mark)