**Neutralization of a Base with an Acid**

This is the typical of the **Provincial exam question**.

Muhammad had been doing a lab in EST and he had a beaker of left over base.

How could Muhammad successfully dispose of the base without damaging the environment?

**Purpose:**

* to neutralize leftover base to safely dispose of it
* to determine the concentration of the leftover base

**Materials:**

|  |  |
| --- | --- |
| * Buret
 | * Beaker of acid solution
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| * BTB
 | * White comparison paper
 |
| * Basic solution in buret at front
 | * Erlenmeyer flask
 |
| * Funnel
 | * Stand and buret clamp
 |

**Procedure:**

* clamp a buret onto a stand at the bench
* use a funnel to add acid from the beaker to the buret
* let acid run through the buret back into the beaker to remove any air from the buret
* obtain 10.00 mL of sodium hydroxide solution from the front buret in the Erlenmeyer
* add 4 drops of BTB
* place the Erlenmeyer under the buret at the bench
* place the white paper under the Erlenmeyer under the buret
* add acid to the base in the buret slowly while swirling until neutralized = colour \_\_\_\_\_\_\_
* dispose of the solution and rinse rinse rinse!
* repeat

**Observations:**

**Title of Table:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| First Trial Initial Buret Volume Measurement (mL) |  |
| First Trial Final Buret Volume Measurement (mL) |  |
| Second Trial Initial Buret Volume Measurement (mL) |  |
| Second Trial Final Buret Volume Measurement (mL) |  |
| Volume of Base (mL) |  |

**Calculations:**

**CAVA = CBVB**

**Conc of the Acid x the Vol of the Acid = Conc of the Base x the Vol of the Base**

**Concentration of the base: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Conclusion**

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**Questions**

1) Why was BTB used?

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2) What do you get when you multiply C x V?

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3) Write an English sentence explaining what the formula means.

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