

## Part-C:Calculation

Normality of sodiumthiosulphate =  $\frac{Y}{X}$  cmVolume of sodium thiosulphate =  $\frac{X}{Y}$  cm1000cm<sup>3</sup> of sodiumthiosulphate = 63.54 g of copperTherefore  $\frac{X}{Y}$  cm<sup>3</sup> of  $\frac{Y}{X}$  N sodium thiosulphate =  $\frac{63.54 \times Y}{1000 \times X}$  g of copperAmount of copper in 25 cm<sup>3</sup> of sample solution "A" =  $\frac{63.54 \times Y}{1000 \times X}$  g of Copper

Amount of copper in given PCB sample is = 10 "A" g of Copper

## Model Procedure:

known weight of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> is added to make a (100 ml) solution in a 100 ml volumetric flask. A known volume (say 10 ml) of this solution is added to a solution containing a known amount of copper. The solution is then titrated with a standard solution of sodium thiosulphate. The endpoint is reached when the solution turns from blue to colorless.

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## Model Calculation:

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of Noan Nal Yem

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Observation and Calculation:

Part-A: Preparation of Copper solution

Sample Details

Sample

Weight of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> of Weighing Bottle

Weight of empty Weighing Bottle

3.6958

Weight of the Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> taken

2.215

T

Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> =  $\frac{\text{Mass of Na}_2\text{S}_2\text{O}_3}{\text{Gram Equivalent weight of Na}_2\text{S}_2\text{O}_3 (248.17)}$

N  $\frac{2.215}{248.17}$

Part-B: Estimation of Copper in Sample solution

Burette readings in CM)

Trial-I

Trial-II

Trial-III Expected Value

Final

10.6

6

Initial

Volume of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> rundown

10.6

8.8

)

Part-C: Calculation

Normality of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> =  $\frac{1}{2}$  Iso

Volume of Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

100 ml

8 P

OP N N

ON Na

in

Amount

Sal

0.002

Salukle 0.002

3.5 eu

T

0

63.54V

10.50

0.04e9

-d.d.i. 1/273

Inference:

The amount of C<sub>2</sub> extracted ap<sub>2</sub>sonl<sub>f</sub>  
 is PPa ximndely O o27g  
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Relevance to Society &amp; Environment:

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Report:

Amount of copper in given PCB sample is = : 0<sub>2</sub>

## Evaluation of Experiment 1

Components	Marks	
	Max	Obtained
Model Procedure &		
Calculation		
Burette Reading &		
Execution		
Inference & Societal		
Relevance		
Total		
Signature of Teacher		