



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY
كلية العلوم

LAB Of Analytical Chemistry

1st Grade

Asst. Lect. Zahraa Hazim Hamid

Lecture 5: Prepare Standard solution of liquid

Department of Medical Biotechnology



Prepare Standard solution of liquid

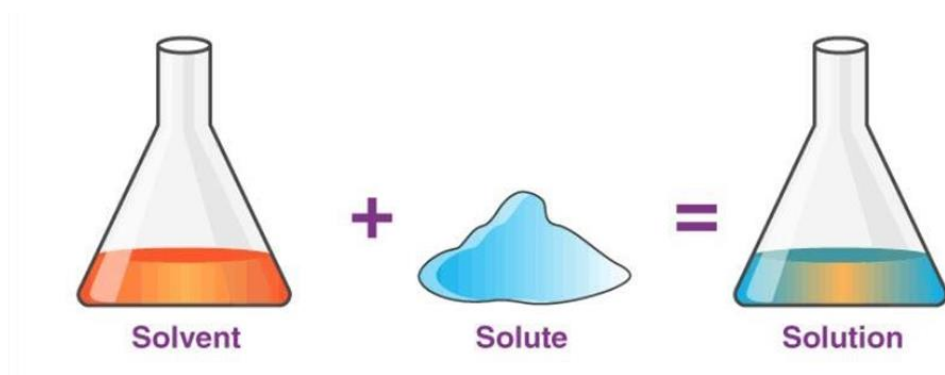
Theory:

The purpose of this experiment is Know Preparation of Standard Solutions from Liquid Materials different concentrations.

solution: a homogenous mixture, which mainly form two components namely solute and solvent.

Solvent: is a substance, usually a liquid that dissolves a salute to form a solution.

Solute: is a substance that dissolves in a solvent to form a solution.



Tools:

Funnel - Stirrer - Beaker - Spatula - Watch Glass -
Volumetric Flask - Washing bottle

Procedure:

1. Use a pipet to take an exact amount from the stock solution (concentrated) into a clean volumetric flask.
2. Put a funnel into the slim neck of the volumetric flask.
3. Add the solvent until the liquid level reaches to the mark on the neck.

Calculations:

$$N = \frac{\% \times Sp. gr. \times 1000}{Eq. wt}$$

$$N_1 V_1 (CONC) = N_2 V_2$$

Q/ Prepare 0.4 M from HCl in 50ml?

Discussion

Q1/ what is the purpose of a standard solution in the lab?

Q2/ why distilled water should be used instead of tap water when preparing a solution?

Q3/ what is the role of a volumetric flask in preparing a solution?