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PROGRAM: BSC MLT.

SUBJECT: BASIC LAB CALCULATION.

1. How to prepare solution by using parts and percent concentration?

Answer : Numerous reagents are blended as percent arrangements either as weight per volume (w/v) when beginning with dry reagents OR volume per volume (v/v) when beginning with fluid reagents. While planning arrangements from dry reagents, a similar mass of any reagent is utilized to make a given percent focus in spite of the fact that the molar fixations would be unique.

All in all,

Weight percent (w/v) = [mass of solute (g)/volume of arrangement (ml)] x 100, and,

Volume percent (v/v) = [volume of solute (ml)/volume of arrangement (ml)] x 100

For instance, a 100 ml of 10% arrangement of any dry reagent would contain 10 g dry reagent in a last volume of 100 ml.â A 10% (v/v) arrangement would contain 10 ml solute/100 ml arrangement volume.

1. Define basic unit, derived units, suspension, ionic solution and super saturated solution.

**ANWSER:**

**1.Basic unit**: A basic unit also involve to as a base unit is a unit which adopted for measurement of quantity

**2. Derived unit:** A unit of estimation got by duplication or division of the base units of a framework without the presentation of mathematical variables.

**3.Suspension:** The reaction in which solute are not dissolve in solvent is called suspension.

**4.Ionic solution:** Any substance

e which, when disintegrated in water, isolates into sets of (particles) of inverse charge. For instance, sodium chloride (basic salt) when broken up in water structures positive particles of sodium and negative particles of chloride.

**5.Super saturated solution:** A solution in which we dissolve solute with the help of more heat again and again and giving more an a more temperature.

1. Write a note on dilution ratio and concentration of dilution with example.

Answer:

Dilution ratio: to reduce the concentration chemical is called dilution. Part of solute to the total number of part .

H2o=milk

100.900= 1.9

1.total solution.

2.concentration solution fever form of chemical is concentration spolution.

1. How to calculate serial dilutions?

Answer: In sequential weakenings, you duplicate the weakening elements for each progression. The weakening variable or the weakening is the underlying volume isolated by the last volume. For instance, on the off chance that you add a 1 mL test to 9 mL of diluent to get 10 mL of arrangement, DF=ViVf = 1mL10mL=110

5.Explain pH and pOH with scale and examples.

Answer : PH: Ph is a scale of acidic from 0 to 14 if tell us acidic solution or alkaline substance is or acidic solution have lower PH . more alkaline solution have higher Ph substance that aren’t acidic. Alkaline is neutral solution usally have a Ph 7 .

**Scale :** The pH scale ranges from 0 to 14. A pH of 7 is unbiased. A pH under 7 is acidic. A pH more prominent than 7 is fundamental**.**

**P0h** : its is the measure of alka of solution aqueous solution at 250 with Poh less then7 are alkaline Poh are greater then 7 are acidic and POh

Equal to 7 are greater

**Scale :** The pOH scale is like the pH scale in that a pOH of 7 is demonstrative of a nonpartisan arrangement. An essential arrangement has a pOH of under 7, while an acidic arrangement has a pOH of more noteworthy than 7. The pOH is helpful to utilize when finding the hydroxide particle focus from an answer with a known pH

**Example :**

pH = - log (0.0025) = - ( - 2.60) = 2.60. Top. Top. pOH = - log [4.82 x 10-5] = - ( - 4.32) = 4.32. Top. Top. pH = 14 - pOH = 14 - 11.76 = 2.24. Top. pKa = - log (1.78 x 10-5) = - ( - 4.75) = 4.75. Top. Top. pKb = - log (4.4 x 10-4) = - ( - 3.36) = 3.36. Top.