

Textile Chemistry Ist minor test 12th Sept 2017

Textile Chemical Analysis V Semester 2017

Q.No. 1 Define surface active agents and its application in textile chemical processing

Answer Surface active agents are long chain hydrocarbon molecules having cationic or anionic charge. they are water soluble. They are divided in three parts (a) cationic (b) anionic (c) nonionic . they reduce the surface tension of water . it has application in all chemical processing treatments e.g wetting agent , dispersing agent, leveling agent and water solubilizing agent. Auxiliaries are having application in pretreatments ,dyeing ,printing and finishing.

Q.No.2 Convert 200 cc N/10 HCL in g/l

Answer
$$\text{Normality} = \frac{\text{No. of equivalents}}{\text{Volume in liters}}$$

$$1/10 = x/200/1000$$

Calculate x and convert into g/l

Q.No.3 How cationic surfactant are detected

Answer - Make standard 4 g/l of solution and take 10 ml in test tube and sodium carbonate so that solution became alkaline with pH 9-10. Add 2-3 drops of bromophenol blue indicator and 5 ml chloroform solution . A blue coloration of chloroform solution indicates cationic surfactant.

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Q.No. 1 write the method to test the silicone softeners

Answer - the active content silicone oil is measured by 1;4 dioxane and salt method. In salt method 20 ml silicone softner is taken in measuring cylinder. Add 20 ml of 30% common salt solution. the cylinder is kept constant for 2 hrs. after that three layers are formed. (a) water and 30% salt layer (b) emulsifier layer (c) silicone oil layer. The % of oil content will be the volume of silicone oil

Q.No. 2 Discuss the fastness properties

Answer –There are four major fastness properties (Light fastness) (2) Washing fastness (3) Rubbing fastness (4) perspiration fastness

Light fastness – the resistance of color (shade) of the fabric towards sun light its rating is, 1-8

Washing fastness- – the resistance of color (shade) of the fabric towards detergents solution its rating is ,1-5.

Rubbing fastness - the resistance of color (shade) of the fabric towards the dry and wet rubbing its rating is, 1-5.

Perspiration fastness - the resistance of color (shade) of the fabric towards acidic and basic body perspiration , its rating is 1-5.

Q.No. Write the method to find out % purity of H_2O_2

Answer – Prepare 10 gm/l standard sample solution (100, 50,10 volume). To 10 ml of this diluted solution we add 200 ml water and 30 ml (20 %) H_2SO_4 solution. The mixture is titrated with N/10 $KMnO_4$ solution.

1 ml N/10 $KMnO_4$ = 0.001701 gm H_2O_2