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INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF CHEMISTRY
CLASS IX
LAB SHEET - II

TO PREPARE TRUE SOLUTION,COLLOID AND SUSPENSION

Experiment – …2…… Date: ……..

Objective: To prepare: (a). A true solution of common salt/ sugar, (b) A suspension of soil/chalk powder in water and (c) A colloidal dispersion of starch/egg albumin/milk in water

Requirement: Test tubes, Test tube rack, Rubber corks, milk, distilled water, common salt, chalk powder, water etc.

Procedure:

1. Take about 5-10 ml of distilled water in a test tube.
2. Add about a drop or 2 of milk to it and mix well.
3. Allow to stand for some time
4. Dissolve common salt in about 5 ml of water taken in a test tube to prepare a sample of true solution
5. Mix chalk powder in about 5 ml. of water to prepare a sample of suspension.

Test	True solution	Colloid	Suspension
Check transparency	Transparent	Translucent	Turbid, opaque
Whether the sample can be separated by filtration or not.	a. Sample particles are not visible at all. b. Filtration is not possible.	1. Sample particles do not settle. 2. Filtration is not possible	a. Particles settle upon standing b. Filtration is possible
Stability	Stable	Stable	Unstable

Precautions:

1. Use only dilute solutions
2. Do not add excess of milk
3. Use a very fine powder of chalk

Answer the following:

1. Give four examples of colloidal dispersions. (Blood, starch solution, soap solution, milk)
2. Are colloidal particles neutral of electrically charged? (they are either +ve or - ve)
3. Give the difference between colloidal dispersion and suspension.

Property	Colloid	Suspension
Particle size:	10^{-7} to 10^{-5}cm	>10^{-5} cm
Visibility:	invisible	visible
	Translucent	Opaque
	Shows Tyndall effect	Does not show
	Shows Brownian movement	Does not show

4 It is not correct to use the term “solution” to represent a colloid. Why? (dispersion is the right term)

5 Classify the following as suspension, true solution and colloid:

a. Sugar syrup b. chalk powder in water c. salt solution
d. soap solution e. S in CS_2 f. human blood

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Multiple choice type questions

1	The mixture which will appear translucent a) Copper sulphate +Water b) Alum +Water c) Sugar +Water d) Starch +Water
2	Which among the following is not a mixture a) Sugar solution b) Sodium chloride solution c) Air d) Sulphur dioxide
3	A student carefully observed the properties of colloid of egg albumin in water and listed them as below that it was: I) translucent ii) stable iii) homogeneous iv) filterable The property which is not correct is: a) (i) ,(iii) b) (ii), (iii) c) (iii), (iv) d) (i) , (iv)
4	Which one of the following is wrong about mixture a) It is always heterogeneous b) It may contain any number of elements &compounds c) The components can be easily separated d) The properties of the mixture are same as those of its components
5	Four students took 4 beakers A,B,C,and D half filled with water. They dissolved soil, chalk powder,sugar,fine sand in them after observation they found that a) A ,B & D are suspensions b) B ,C& D are suspensions c) C ,B & A are suspensions d) A ,C & D are suspensions
6	An example of suspended particles in a mixture a) Soap in water b) Milk in water c) Alcohol in water d) Saw dust in water
7	The colloidal solution where both the dispersed phase &dispersion medium are liquids is a) Milk churned with water b) Butter c) Shaving cream d) Starch solution in water
8	Tyndall effect is observed in which one of the following a) True solution b) Starch +water c) Common salt +water d) Alum +water
9	You have prepared 4 different mixtures in water using charcoal powder,chalk powder,slaked lime &detergent powder.if you filter these mixtures through a filter paper there will be no residue left after filtration in case of a) Chalk powder b) Charcoal powder c) Slaked lime d) Detergent powder
10	To prepare a colloidal solution of starch in water a) Add starch powder to boiling water &cool b) Add starch powder to cold water &boil c) Heat starch,add it to cold water &then bring to boil d) Add thin paste of starch to hot water with stirring.

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