

NOTES

CLASS 6

SCIENCE

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SEPARATION OF SUBSTANCES

Handpicking, winnowing, sieving, sedimentation, decantation and filtration are some of the methods of separating substances from their mixtures.

Mixtures

A mixture is a material made up of two or more different substances, which are mixed but are not combined chemically.

Separation

Separation is the process of separating one or more components from a mixture. Example: distillation, sedimentation, filtration etc.

Handpicking

Handpicking is a method of separation used to separate large sized impurities like pieces of dirt, stone, and husk from wheat, rice or pulses.

Threshing

Threshing is the process of beating stalks to separate the grains from the harvested crop.

- It is done manually by farmers, or by threshing machines.

Winnowing

- Method of separation used to separate heavier and lighter components of a mixture by wind or by blowing air.
- Normally, this is used to separate husk from grains.

Sieving

Sieving is a method of separation in which the mixture is passed through a filter or a sieve.

- The larger particles, usually the impurities, do not pass through the filter, and hence collect on the sieve.
- The finer particles flow past the sieve and can be collected below.

Filtration

Filtration is the process of passing the mixture through a filter to remove the solid particles from the fluid components of the mixture.

- For instance, if we pass muddy water through a fine filter, we can notice that the mud gets filtered and the water passes through.

Sedimentation

When the heavier component in the mixture settles when water is added to it, the process is called sedimentation.

- This method is used in separating grains from dust and soil.

Decantation

Decantation is the process after sedimentation that involves removing the water, along with the impurities.

Condensation

The process of conversion of water vapour into its liquid form due to contact with a cooler surface is called condensation.

- Example: Formation of water droplets on a metallic lid, while boiling water.

Evaporation

The process of conversion of water into its vapour is called evaporation.



- The process of evaporation takes place continuously wherever water is present.

To know more about “Methods of Separation”, visit the link below;

Solution

A solution is a homogeneous mixture composed of two or more substances.

- In such a mixture, a solute is a substance dissolved in another substance, known as a solvent.

Saturated solution

A saturated solution is a chemical solution containing the maximum concentration of a solute dissolved in the solvent.

- For example, a saturated solution of salt in water is that in which no more salt can be dissolved.
- This added salt will just sediment down to the bottom of the vessel.

Churning

Churning is the process of shaking up cream or whole milk to make butter.

Some Important Questions-

1. What is strainer?

Ans. Strainer is a kind of sieve which is used to separate a liquid from solid.

2. Name the method used to separate cream from curd?

Ans. Centrifugation.

3. How will you separate mango from a mixture of mango and apple?

Ans. By picking.

4. You are given a mixture of salt and sand. Can you separate them by picking?

Ans. No, we cannot separate them by picking.

5. Name the method used to separate the pieces of stone from grain?

Ans. Handpicking.

6. How can you separate grains from stalk?

Ans. We separate grains from stalk by threshing.

7. What types of material can we separate by using handpicking?

Ans. The materials having different size and colour can be separated by handpicking.

8. Name the other methods used to separate solid materials of different size?

Ans. Sieving.

9. Name the process used to separate heavier and lighter components of a mixture?

Ans. Winnowing.

10. Can the above stated method be used if both the components have same weight?

Ans. No, this method cannot be used.

11. What is evaporation?

Ans. The process of conversion of water into vapour is called evaporation.

12. Name the method by which we get salt from ocean water?

Ans. Evaporation.

13. What is mixture?

Ans. When two or more than two substances are mixed together in any ratio then it is called a mixture.

14. Write various methods of separation of components from their mixture?

Ans.

1-Handpicking 2. Threshing 3. Winnowing 4. Sedimentation 5. Decantation
6-Filtration 7. Evaporation 8. Condensation





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