

Ncert Solutions Class 6 Science Chapter 5

Ncert Solutions For Class 6 Science Chapter 5 Separation of Substances

1. Why do we need to separate different components of a mixture? Give two examples.

Answer

We need to separate different components of a mixture:

- to separate harmful or non-useful substances that may be mixed with it.
- to separate even useful components if we need to use them separately.

Two examples are:

- Milk or curd is churned to separate the butter
- Grain is separated from stalks, while harvesting.

2. What is winnowing? Where is it used?

Answer

Winnowing is method of separating components of a mixture. It is used to separate heavier and lighter components of a mixture by wind or by blowing air. This method is commonly used by farmers to separate lighter husk particles from heavier seeds of grain.

3. How will you separate husk or dirt particles from a given sample of pulses before cooking?

Answer

To separate husk or dirt particles from a given sample of pulses before cooking, we need to wash the pulses with water. Husk or dirt particles being lighter keep floating in water and pulses grain will settle down so we can easily remove them. Then, water with impurities can be removed by decantation.

4. What is sieving? Where is it used?

Answer

Sieving is a method of separation which allows the fine flour particles to pass through the holes of the sieve while the bigger impurities remain on the sieve. It is used at home to separate pebbles and stones from sand.

5. How will you separate sand and water from their mixture?

Answer

We can separate sand and water from their mixture by:

- Sedimentation and decantation: Being sand insoluble and heavier than water, it settles down at the bottom. Then after we can easily separate water from sand.
- Filtration: The mixture of sand and water is poured on a piece of cloth or filter paper so that water goes down through it and sand remains on the piece of cloth or paper.

6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

Answer

Yes, it is possible to separate sugar mixed with wheat flour. This can be done through the process of sieving. The mixture of sugar and wheat flour is allowed to pass through a sieve. The fine wheat flour passes through the sieve while sugar remains on the sieve.

7. How would you obtain clear water from a sample of muddy water?

Answer

By the method of filtration, we can obtain clear water from a sample of muddy water. The sample of muddy water is passed through a filter paper. Clear water will pass through the filtering medium while mud will remain on water.

8. Fill up the blanks:

(a) The method of separating seeds of paddy from its stalks is called _____.

► Threshing

(b) When milk, cooled after boiling, is poured onto a piece of cloth the cream (malai) is left behind on it. This process of separating cream from milk is an example of _____.

► Filtration

(c) Salt is obtained from seawater by the process of _____.

▶ Evaporation

(d) Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called _____.

▶ Sedimentation and decantation

9. True or false?

(a) A mixture of milk and water can be separated by filtration.

▶ False

(b) A mixture of powdered salt and sugar can be separated by the process of winnowing.

▶ False

(c) Separation of sugar from tea can be done with filtration.

▶ False

(d) Grain and husk can be separated with the process of decantation.

▶ False

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10. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would it be possible to dissolve more sugar?

Answer

We should add ice after dissolving sugar because the dissolving power of water decreases with decrease in temperature. So, if we add ice before dissolving sugar, less amount of sugar will get dissolved.