

CLASS- VII

SUBJECT- CHEMISTRY

CHAPTER- 3

TEACHER- ANAMIKA

(E) Modern Techniques :-

Chromatography :- This is one of the latest technologies to separate the coloured components of a mixture when all the components are very similar in their properties.

The name "chromatography" means colour writing. It is named so, because earlier it was used to separate mixtures containing coloured components only, but these days this technique is applied to colourless substance too.

Common adsorbents used are filter paper, silica gel etc.

Common solvents used are water, ethyl alcohol, acetic acid etc.

Example:- Components of ink are separated by this method. Ink is a mixture of different dyes, which are separated by chromatography because some of the dyes are less soluble and some are more soluble in a solvent.

Students, you may observe or read the Advantages of chromatography and Use of chromatography from your chemistry notebook on page no- 43

(P.T.O.)

Students, next we will discuss the topic
'Separation of constituents of the mixtures with more than two constituents'.

Separation of Constituents of the mixtures with more than two constituents :-

(a) Sand, Saw dust and salt :-

The mixture is taken in a glass beaker and water is added to it. Salt dissolves in water, forming a salt solution, because it is soluble in water. Saw dust being lighter floats on the surface of water while sand being heavier settles down. Now salt solution along with saw dust is poured slowly on the filter paper fixed in a funnel. Solution passes through the filter paper while saw dust remains on it. Sand is left in the beaker as sediment. The salt solution is evaporated to get salt from water. In this way all the components get separated.

(b) Iron filings, sulphur And Common salt :-

To separate the constituents of this mixture, first a magnet is brought near it. Iron filings get attracted and separated. Now water is added to the mixture. Common salt dissolves in it leaving behind sulphur. The mixture is filtered. Sulphur collects on filter paper as residue while salt solution passes through the filter.

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paper as filtrate. It is then evaporated to get salt from water.

Now, I will ask you three very short questions. You will get a three minutes break to write the answers.

The Questions are:-

Q1:- The liquid which passes through the filter is called _____.

Q2:- Name the method which is used to separate the cream from milk.

Q3:- Name the latest techniques used to separate the coloured components.

I hope you all have written the answers by now. Let us check the answers by now.

Ans 1:- Filtrate.

Ans 2:- Centrifugation.

Ans 3:- Chromatography.

Now, I am ending the lesson for today by giving 'Instruction' and 'Homework'.

(P.T.O.)