

# CHEMISTRY STUDY MATERIALS FOR CLASS 9

## (NCERT based Revision Notes on Chapter - 2)

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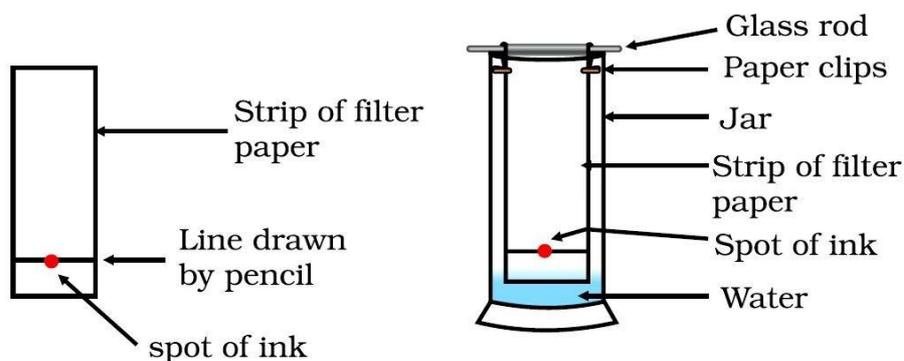
### Is Matter Around Us Pure

#### CHROMATOGRAPHY

Chromatography is a method of separation which works on the principle of travel speed of components of a mixture. This method is used for separating dyes and pigments from a mixture. Ink is the mixture of dyes of different colours.

There are many types of chromatography. The dyes from an ink can be separated using paper chromatography.

For this, a strip of filter paper is dipped in the ink. Particles of dye start rising on filter paper; along with water. Different dyes rise with different speed because of different types of solubility in water and go up to certain heights.



#### **Application of chromatography -**

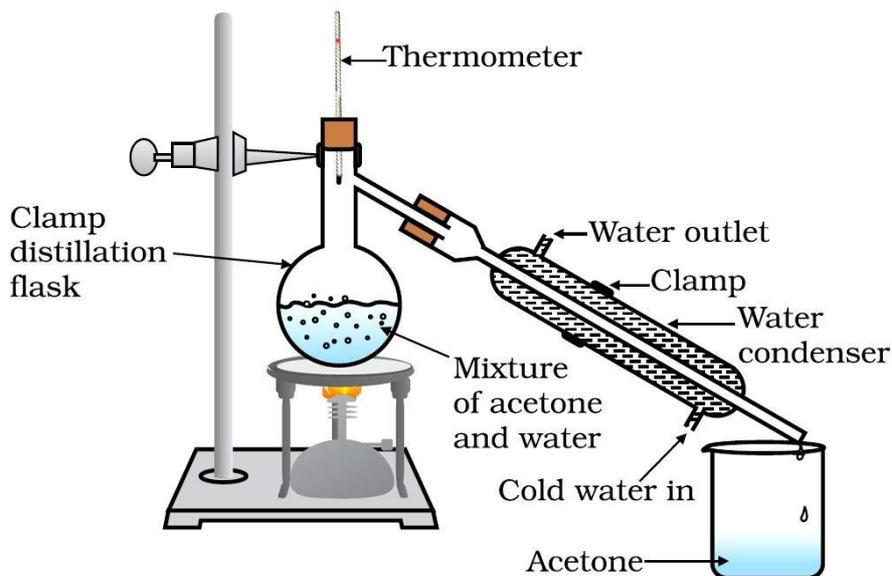
- In the separation of colours from a dyes.
- In the separation of pigments from natural colours.
- In the separation of drugs from blood for pathological tests.

## DISTILLATION

**Distillation** is a method for separating the component substances from a liquid mixture by selective evaporation and condensation.

- **Used in:** Production of gasoline, distilled water, xylene, alcohol, paraffin, kerosene etc.

The process of distillation is used to separate two miscible liquids. The technique of distillation is based on the difference in boiling points of



components of mixture of miscible liquids. Distillation is to separate the liquids which do not decompose even upto their boiling points and should boil at more than  $25^{\circ}\text{C}$ .

In the process of distillation, the mixture is heated after keeping in a retort or distillation flask. The liquid which boils at lower temperature is vaporized at lower temperature. The vapour so obtained is passed through a tube and gets condensed in a separate container; leaving liquid with higher boiling point in the retort or distillation flask.

Distillation is used to separate the components of the mixture of two miscible liquids that boils without decomposition and have sufficient difference in their boiling points.

The process of distillation is used to purify many liquids, such as water.

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