

Separating Mixtures

This is the fifth text which will be used for practicing dictation and translation in the written part of the exam.

The key words are emphasized in bold and there is a list of them at the end of the presentation.

Separating Mixtures

Scientists need to separate mixtures in order to investigate their components. **Decantation** is the process of carefully pouring away the liquid above a **precipitate** or **suspension** once it has settled.

A **centrifuge** is an apparatus which separates dense components from less dense ones by rotating them in a tube in a horizontal circle at high speed. It can be used to separate fine insoluble particles in a liquid suspension or dense liquids from less dense ones.



Separating Mixtures


Distillation – A process called distillation will separate a liquid from a mixture. The mixture is heated until the liquid boils and changes into a gas. The gas is then led into a **condenser**, where it cools to form a pure liquid.



Fractional distillation – This process is used to separate a mixture of liquids with different boiling points. To extract gases from air for industrial use, the air must be cooled first and **liquefied**. As the air warms, liquid gases boil off at different temperatures.

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Evaporation – Heat can drive off a liquid from a mixture by making it evaporate. In tropical climates, evaporation is often used to obtain salt (sodium chloride) from sea water. Shallow **salt pans** dug out on the coast flood with sea water. The water evaporates in the sun, leaving salt crystals.



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Filtration – It is possible to separate large solid particles from a liquid mixture using a filter. A filter is a **porous barrier** that allows the liquid (**the filtrate**) to pass through but holds back the solid particles (**the residue**).



Desiccation – A **desiccator** removes water taken up by a solid mixture. It is a sealed glass dish containing a **moisture-absorbing** substance called a **desiccant**. Rock salt is stored in a desiccator to keep it dry for laboratory use.

Key words:

Decantation – dekantacija

Precipitate – precipitat, talog

Suspension – suspenzija

Condenser – kondenzator

To extract – ekstrahovati

To liquefy – pretvoriti u tecno stanje

Evaporation – evaporacija, ispravanje

To evaporate - isparavati

Key Words

To obtain – dobiti

Salt pan – slaniste

Filtration – filtracija

Filtrate – filtrat

Porous barrier – porozna barijera, prepreka

Residue – ostatak, talog

Desiccation – eksikacija, susenje

To desiccate – eksikovati, susiti

Desiccant – eksikant

Moisture-absorbing – upijanje vlage