

# Mixtures and compounds

- ① Place each substance under the correct heading in the table below. (3 marks, ★)

air	salty water	oxygen
hydrogen	water	sodium hydroxide

Element	Compound	Mixture

## NAILIT!

In this section you need to be aware of the differences between mixtures and compounds, and how mixtures can be separated. These methods are also covered in other topics (e.g. fractional distillation and the production of soluble salts).

- ② A student prepares a soluble salt by reacting copper(II) oxide with hydrochloric acid. He ends up with a solution of copper(II) chloride. Describe how solid copper(II) chloride could be obtained from this mixture. (2 marks, ★★)

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- ③ A mixture of salt and water can be separated by simple distillation.

- a Name the piece of apparatus labelled A. (1 mark, ★)

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- b Explain how pure water is obtained during this process. (3 marks, ★★★)

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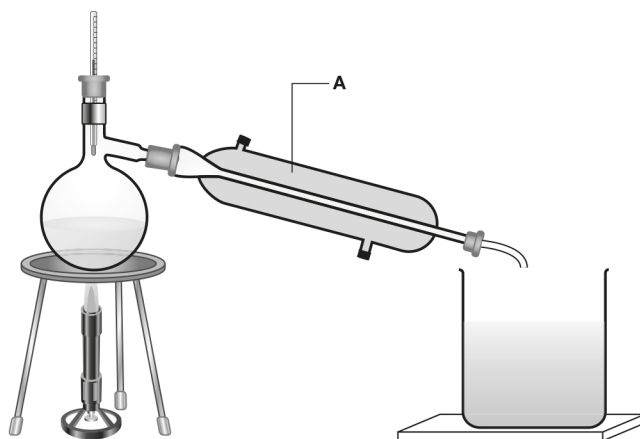
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- ④ Rock salt is a naturally-occurring mineral that consists of a mixture of sodium chloride and sand. Sodium chloride is soluble in water and sand is insoluble in water. Describe how both the sodium chloride and sand could be separately extracted from the rock salt. (4 marks, ★★★)

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