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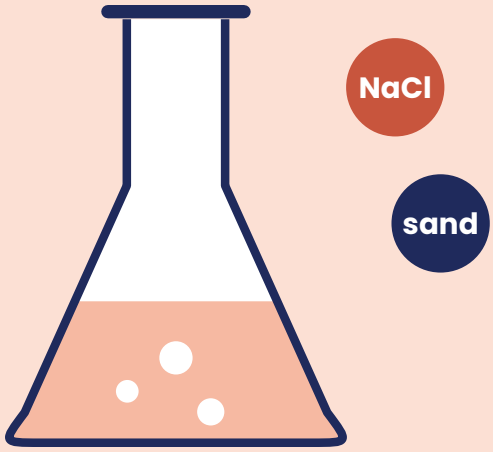
Year 7 • KS3 Chemistry

Separating Mixtures

Homework Worksheet

Practise solutions, filtration, evaporation, distillation and paper chromatography.



Solutions | Filtration | Evaporation | Distillation | Chromatography | Real life

KEY IDEAS IN THIS WORKSHEET **YEAR 7**

Name: _____ Class: _____

Date set: _____ Date due: _____

What's inside

Section A	Key words	**9 marks**
Section B	Choosing a method	**15 marks**
Section C	Distillation and chromatography	**14 marks**
Section D	Applying ideas	**4 marks**

Instructions

- Answer all questions in the spaces provided.
- Show your working in calculations.
- Marks for each question are shown in [ ].
- Use the word boxes and diagrams to help you.

Total score

/ 42

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Separating Mixtures Worksheet

Year 7 • KS3 Chemistry • Mixtures, solutions, filtration, evaporation, distillation and chromatography.

Section A Key words [9 marks]

Word box mixture | solvent | solute | solution | filtrate | residue | soluble | insoluble

1 Use words from the box to complete the sentences. Each word can be used once.

(a) A substance that dissolves in a liquid is called ..... . [1]

(b) A substance that does not dissolve is ..... . [1]

(c) Salt dissolved in water makes a ..... . The salt is the ..... and the water is the ..... . [3]

(d) The solid left on the filter paper is the ..... and the liquid that passes through is the ..... . [2]

2 What is the difference between a mixture and a pure substance? [2]

Section B Choosing a method [15 marks]

3 Match each mixture to the best separation method. Choose from: **filtration, evaporation, distillation, chromatography, magnet**. [5]

Mixture	Best method
Sand and water	
Salt dissolved in water (to get the salt)	
Pure water from salty water	
The colours in black ink	
Iron filings and sulfur	

4 Describe how to separate sand from a mixture of sand and water. [3]

5 Describe how to get pure salt from salt solution. **[3]**

6 A pupil wants to get the salt from a mixture of salt and sand. List the steps in the correct order. **[4]**

Section C Distillation and chromatography [14 marks]

7 Explain how simple distillation separates pure water from salty water. **[4]**

8 Explain why the water passes out of the condenser but the salt stays behind in the flask. **[2]**

9 Describe how to use paper chromatography to separate the colours in a black felt-tip ink. **[4]**

10 Explain why the start line must be drawn in pencil and not pen. **[2]**

.....

.....

11 A chromatogram is made of an unknown ink and two known inks. The unknown ink gives 3 spots. Ink A gives 2 spots. Ink B gives 3 spots at the same heights as the unknown ink. Which ink is the unknown ink? Explain your answer. **[2]**

.....

.....

Section D Applying ideas [4 marks]

12 Give one example of how separating mixtures is used in real life. **[1]**

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13 In hot countries, salt is obtained from sea water by leaving it in shallow pools. Explain how this works. **[3]**

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END OF WORKSHEET **Total: _____ / 42**