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1

Clean drinking water is important for health. In the UK water from reservoirs goes through a series of steps before it is safe to drink. **[2 marks]**

What are the two main steps used to treat water from reservoirs?
Give a reason for each step.

Step 1

Reason

Step 2

Reason

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2

Explain why it is more difficult to produce drinking water from waste water than from water in lakes. **[3 marks]**

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3

a) Pure water can be produced by distillation. **[1 mark]**

Why is distillation not usually an economic method of treating water for drinking?

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b) How could the water be tested to show it is pure?
Give the expected result of the test for pure water. **[2 marks]**

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A student wanted to find out how much solid was dissolved in sea water.

This is the method the student used:

- measure the mass of an empty evaporating basin
- measure 25 cm³ of sea water and pour it into the evaporating basin
- heat the evaporating basin gently until all of the water has evaporated
- measure the mass of the evaporating basin containing the solid residue.

(a) What piece of apparatus would be suitable for measuring 25 cm³ of sea water? **[1 mark]**

(b) How could the student check that all of the water had evaporated? **[2 marks]**

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The results the student obtained using 25 cm³ of sea water are:

mass of empty evaporating basin = 23.21 g
 mass of evaporating basin and dry solid residue = 24.04 g

Calculate the mass of solid dissolved in 1000 cm³ of the sea water.

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Mass dissolved in 1000 cm³ = g

[2 marks]

(Total 13 marks)

End