

Mass (g) of sodium bromide weighed on the balance

5.587
Edit

The procedure asks you to create a dilute solution that is 12.5 mL of stock salt solution and 12.5 mL of DI water. Do you think it is more important to: precisely measure 12.5 mL OR to make sure the volume of salt solution is the same as the volume of water added?

Try 1: ✗ precise measuring
Try 2: ✓ volumes are equal
Correct Answer: ✓ volumes are equal

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If your volume changes due to evaporation between trials 1 & 2, do you think it will significantly impact the measured boiling point? Why? NOTE: There is not a "right" answer, but you need to have clear justification for your answer.

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Volume is not part of the equations used in these calculations so it will not affect the measured boiling point.

Edit Answer

[But if the volumn decrease, the molality of salt will increase. so the bp will be impacted but not significant.]

Molality of 25.0 mL sample of your original 50 mL sodium bromide solution.

Try 1: ✓ 1.1

NOTE: This is an experimental value so use the experimental mass you submitted above. This is asking what happens if you pour some from the volumetric flask into a beaker. That's it.

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Info

Molality of the sodium bromide solution made by mixing 12.5 mL of the 1.1m sodium bromide and 12.5 mL distilled water.

Try 1: ✗ 1.1
Try 2: ✓ 0.55

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	Trial 1	Trial 2
Boiling point (°C) of 1.1m sodium bromide solution	105.1 Edit	106.1 Edit
Boiling point (°C) of 0.55m sodium bromide solution	108.0 Edit	108.5 Edit

Average boiling point (°C) of 1.1m sodium bromide solution

Try 1: ✓ 106

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Average boiling point (°C) of 0.55m sodium bromide solution

Try 1: ✓ 108

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Does the experimental boiling point elevation match the theoretical boiling point elevation within experimental error ($\pm 0.1^\circ\text{C}$). NOTE: Use your higher molality boiling point average.

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Try 1: ✗ Yes
Correct Answer: ✓ No