

## FINDING YOUR THRESHOLD OF TASTE

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The objective of this experiment is to determine the lowest concentration of a substance dissolved in water which can still be tasted (**threshold**). Substances tested are sugar and salt.

The aims of the practices are to determine the threshold of taste for sweetness and saltiness, review the specific vocabulary of lab material, be able to ask for necessary material and explain why it is use for, follow instructions, collect and plot the data, give and discuss results.

### PROCEDURE:



### WORK IN PAIRS AND FOLLOW THE INSTRUCTIONS

1. Label 6 plastic cups from 1 to 6 with a permanent marker.
  2. With the 10 mL graduated cylinder, measure out 10 mL of water and pour them into a plastic cup. Mark the level with a permanent marker.
  3. With the 100 mL graduated cylinder, measure out 100 mL of water and pour them into a plastic cup. Mark the level with a permanent marker.
  4. Graduate the six cups copying the 10 and 100mL line marks.
- Prepare 10%; 1%; 0.1%; 0.01%; 0.001% and 0% sugar solutions.
5. Add 10 g of sugar to cup number 1. Fill it with plain water till 100mL mark. Stir to mix well. This will give you a 10% sugar solution.
  6. Add 10 ml of the 10% sugar solution to cup number 2. Add 90 mL of water (filling the cup till the 100mL mark). Stir to mix well. This will give you a 1% sugar solution.
  7. Repeat step two, but now, fill till the line of 10ml with 1% sugar solution. Add 90 mL of water. Stir to mix well. This will give you a 0.1% sugar solution.
  8. Following the same procedure prepare 0.01% and 0.001% sugar solutions.
  9. Rinse your mouth with plain water.
  10. Put on a blindfold. Taste the samples that your partner brings you.
  11. Your partner has to record the results in the data chart (see below). If you can taste sweetness, your partner should write “+”; otherwise, “-”.
  12. REMEMBER rinsing between samples your mouth with plain water.
  13. The lowest concentration at which you can still taste the sweetness is your approximate taste threshold.
  14. Once finished, change rolls with your partner. You take notes and your partner tastes the samples.

15. Repeat the process with salt.

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**ACTIVITY 1: DATA COLLECTION**

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Follow the instructions of the procedure and take note of the results.

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**ACTIVITY 2: RESULTS**

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Put the data in common. Count how many students reach each threshold (remember, the threshold is ONLY the lowest concentration tasted).

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**ACTIVITY 3: DISCUSSION**

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Individually, plot the data using a bar graph. Make two different graphs, one for sweetness and another for saltiness.

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