Which Drink Melts Ice The Fastest?

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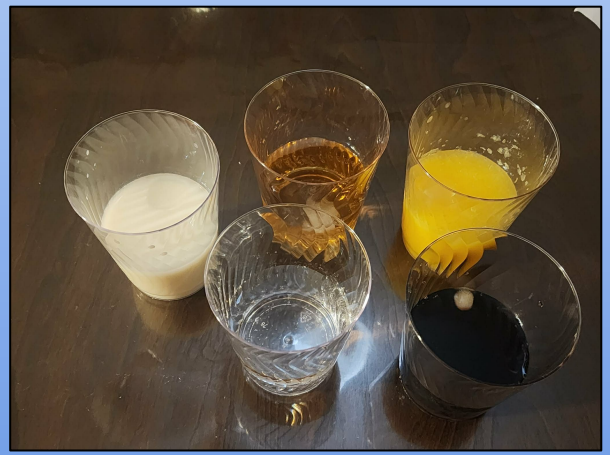


Introduction

Does what we drink change how ice melts? This experiment compares the melting times of ice in Sam's Diet Cola, water, berry juice, orange juice, and milk. Using a thermometer and precise timing across three trials, I am testing the hypothesis that Sam's Diet Cola will be the fastest due to its carbonation, while the density of milk will make it the slowest.

Materials List

Liquids:

Water

Orange Juice

Berry Juice

Sams Diet Cola

Milk

Others:

Thermometer

Stopwatch

Plastic Cups

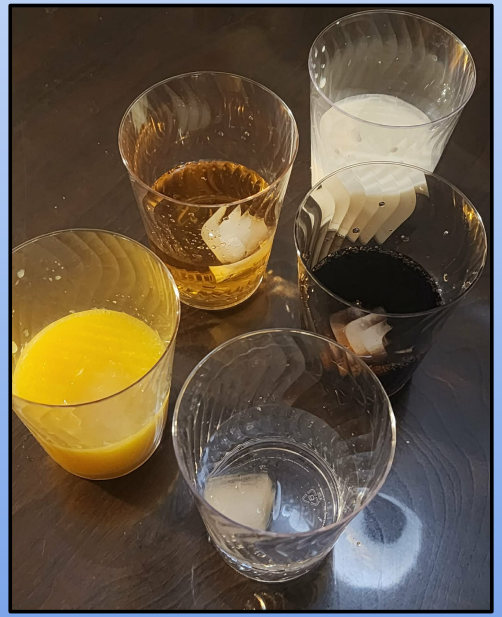
Ice Cubes

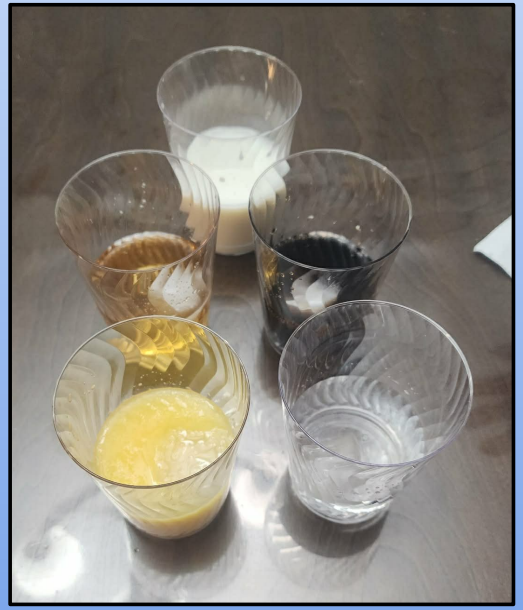
Measuring Cups

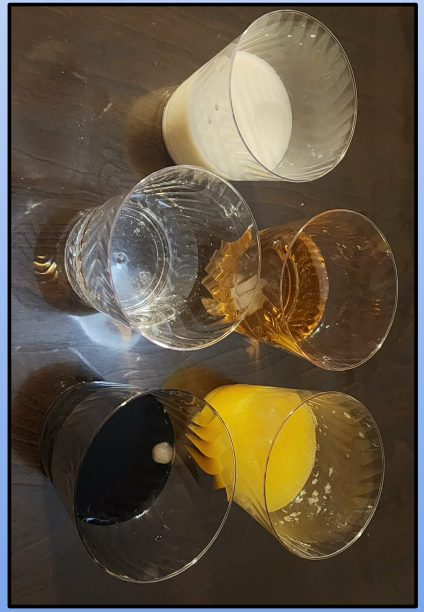
Procedures

To determine which liquid melts ice the fastest, five different drinks orange juice, diet cola, water, milk, and Capri Sun were tested over three trials. To ensure a fair test, all liquids were leveled to room temperature over two hours and verified with a thermometer before adding the ice. The melting time for each cube was carefully timed and recorded, and the results from all three trials were averaged to ensure scientific accuracy and consistency.

Evolution







Results

To ensure the most accurate results, the experiment consisted of three full trials. Upon analysis, the first trial was identified as an outlier and excluded because the liquids had been microwaved, causing inconsistent and unusually fast melting times. By focusing on the controlled second and third trials, the data became more reliable and consistent. The final calculated averages revealed that water melted ice the fastest (16:03), followed by Sam's Diet Cola (27:07), Milk (33:05), and Capri Sun (34:43), with Orange Juice being the slowest at 43:16.

Conclusion

Although the initial hypothesis said Sam's Diet Cola was gonna be the fastest due to carbonation, water proved to be the fastest melting drink, while orange juice was the slowest, probably because of the density of its pulp. The experiment was successful in having consistent liquid amounts and temperatures across trials. However, trial 1 had to be excluded as an outlier because the drinks were microwaved rather than reaching room temperature naturally. One thing I would change in future experiments is that all trials should follow the same heating methods, and increasing the number of trials would further strengthen the reliability of the data.