

Melting Sugar

M-23 CHEMISTRY

Question

What is temperature of water that will melt 3 teaspoons of sugar?

Abstract

The reasoning is so that whenever sugar is needed to be mixed into a drink it's not too warm. Sometimes the water or drink is too hot to drink after the sugar melts or is not hot enough for the sugar to completely dissolve. It could help restaurants and cafés by making the drinks hot enough that the sugar is melted but is not too hot to drink and could save time. The independent variable will be the water temperature and the dependent will be the amount of time it takes for the sugar to dissolve.

Hypothesis

If I increase the temperature of the water, then the time it takes for the sugar to dissolve will be shorter because the sugar will melt faster in warmer temperatures.

Materials

- 3 teaspoons for every trial
- 1 thermometer
- 1 cup of water for each trial
- 1 working water boiler
- 1 mug or cup
- A stopwatch
- A stirring stick/spoon

Procedures

- Measure the water and pour into stove/boiler.
- Boil to the specific temperature and use the thermometer to check.
- Pour the water into the cup and scoop in 3 teaspoons of sugar and start the stopwatch.
- Stir slowly 3 times with the spoon then wait to see how long it takes for the sugar disappears.
- When the sugar disappears stop the stopwatch.

Variables

Independent: The temperature of the water.

Dependent: The time it takes for the sugar to dissolve.

Control: The amount of water and the type and amount of sugar.

Experiment pictures



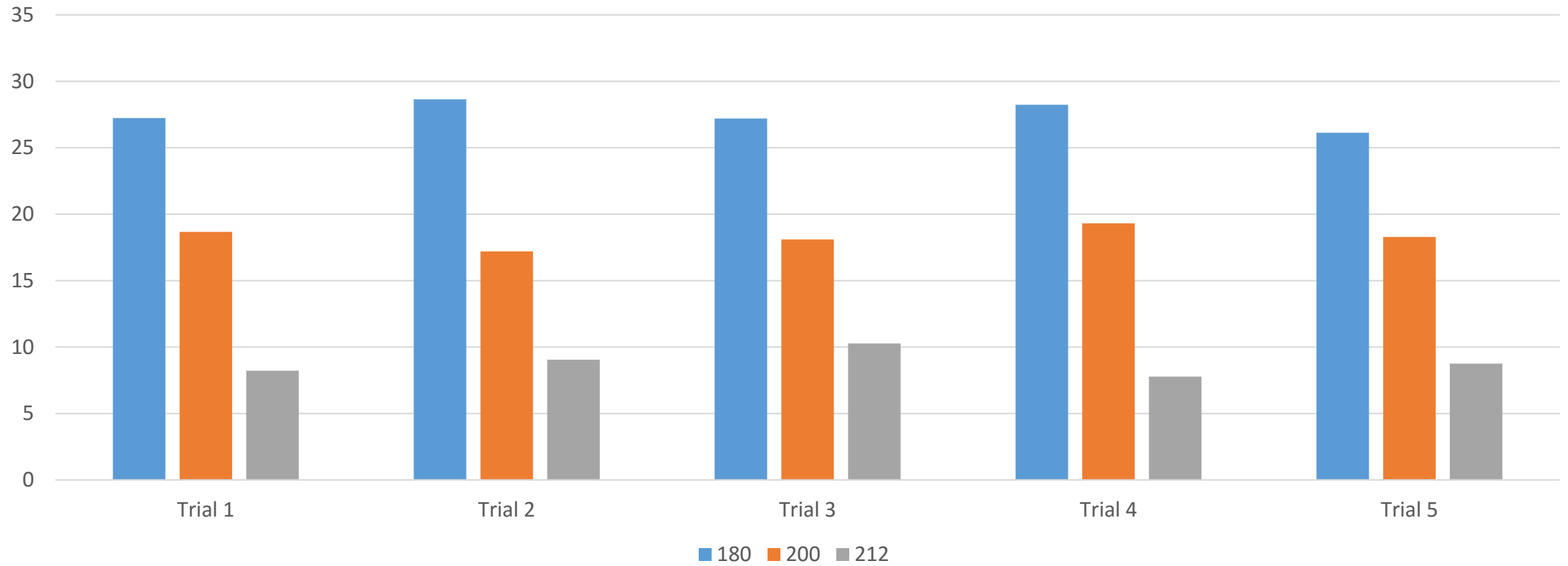
Results

Trials	1	2	3	4	5
212 Fahrenheit	8.22 sec	9.05 sec	10.27 sec	7.78 sec	8.75
200 Fahrenheit	18.67 sec	17.20 sec	18.10 sec	19.31 sec	18.29 sec
180 Fahrenheit	27.23 sec	28.65 sec	27.20	28.23	26.13

Temperature	Average
212	8.814
200	18.314
180	27.488

Graph

Chart Title



Conclusion

The sugar in 180 degrees dissolved the slowest. The one that dissolved the sugar the quickest was 212. The control dissolved the sugar the best. My hypothesis was supported because 212 was the hottest temperature that was tested and the evidence supports that it melts sugar the quickest.

Work Sited

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