

BBQ sauce cooked starch experiment

How does temperature affect starch in a BBQ sauce?

BBQ sauce is a suspension that uses starch to maintain physical stability. (A suspension is a type of heterogeneous mixture that has particles of small size distributed throughout a liquid.) Heat and stirring will be required to activate the starch. Starch begins to swell when it becomes activated which can be seen under a microscope. In this experiment, we will be undercooking, optimally cooking, and overcooking starch in a BBQ sauce. Once samples have been collected, we will then perform starch stains and observe how heat affects starch under a microscope.

Equipment Required

Saucepan
Mixer OR Whisk
Spoons
Bowls, cups, or weigh boats
Thermometer
Scale – change settings to grams
Heat protection – oven mitts, safety glasses
Bottles/Jars with secure lids
Funnel

Ingredients Required

Water
Tomato Paste
BBQ Seasoning – ex: McCormick Grill Mates Barbecue Seasoning
Black Pepper
Brown Sugar
White Granulated Sugar
Modified Corn Starch – ex: Hoosier Hill Farm Clear Gel (Amazon)
Salt
White Vinegar

Follow directions on the following formula sheet to make the BBQ sauce and collect the samples. See separate procedure for starch staining.

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