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An "Egg"cellent "Egg"periment

The purpose of this project is to determine how different cooking applications influence the thermal coagulation of egg proteins.

Start by baking control custard. Fill Pyrex dish with water and place in a 350° oven for 49 minutes. For the oven variable, bake the custard the same as the control but without water in the baking dish. For the egg variable, bake the custard like the control but increase the recipe to two eggs. For the milk variable, bake the custard like the control but use skim milk instead of whole. To find percentage sag, take two readings of the custards thickness. Calculate percentage sag = $(\text{Reading 1} - \text{Reading 2}) / \text{Reading 1} \times 100$. To find the syneresis, partially plug a funnel with cheese cloth, put the custard into the funnel, wait ten minutes for the liquid to drain, and record the amount in mL. Record subjective analysis.

The researcher discovered that the control custard had a percentage sag of 4% and 1 mL of syneresis. The oven variable had 0% percentage sag and 2 mL of syneresis. The egg variable had 0% percentage sag and 2.3 ml of syneresis. The milk variable had a percentage sag of 8.7% and 0.5 mL of syneresis. The researcher also discovered that when the percentage sag is lower, the thermal coagulation is higher. The researcher stated in the hypothesis that the oven variable would have the highest thermal coagulation, this was partially correct because the egg variation did also.