A Very Tense Subject

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This experiment’s goal was to find which liquid had the most surface tension relative to its density out of the 7 liquids tested, which were water, milk, orange juice, maple syrup, soda, dish soap, and vegetable oil. I had believed that the maple syrup would have had the most surface tension (relative to its density). First, I made a square inch base made out of aluminum. Then I put the aluminum on each liquid (there were 4 fluid ounces of each), and then added more weight on top of the aluminum base until the surface tension broke and the base sank. I then found the weight held by the liquid and divided that number by its density. I did this 8 more times, with 3 trials per day. The orange juice, milk, and soda had a similar result, as well as the soap and vegetable oil, but the water ultimately had the highest surface tension, which had proved my hypothesis false. Through further research, I found that the water has a high surface tension because of its natural tendency of it's molecules to hold together. This is a result of hydrogen bonding between the molecules. The experiment was a success, but my hypothesis was rejected by the outcome.

Awards Won: