# Cohesion and Adhesion

**Lab: How many drops of water fit on a penny?**

Take a Guess:How many drops of water can fit on one side of a penny? \_\_\_\_\_\_\_\_\_\_\_

**Part A: Perform a CONTROL test for comparison with later results.**

**Step 1:** Place the penny on paper towel.

**Step 2:** Use an eye dropper to place drops of WATER on the penny (one at a time) until ANY amount of water

runs over the edge of the penny.

**Step 3:** Record the number of drops for that trial in the table.

Repeat Steps 1 - 4 two more times before calculating your average.

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| --- | --- | --- | --- |
| **Trail 1** | **Trail 2** | **Trail 3** | **Average** |
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**Part B: Perform tests with the TESTING LIQUID.**

**Step 1:** Hold the penny with the tweezers provided, then dip it into the TESTING LIQUID.

Allow extra liquid to drip off the penny into the container before proceeding to the next step.

**Step 3:** Place penny on dry spot on a paper towel. Place drops of WATER on the penny (one at a time) until

ANY amount of water runs over the edge of the penny.

**Step 4:** Record your observations and the number of drops for that trial in the table.

Repeat Steps 1 - 4 three more times before calculating the average.

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| **Trail 1** | **Trail 2** | **Trail 3** | **Average** |
|  |  |  |  |

**Analysis Questions:**

**Directions:** Answer the following questions in COMPLETE sentences.

1. Why do you think more droplets stayed on the penny in trial one? (Use the vocab words cohesion and surface tension I your answer).
2. Do you think the testing liquid is polar or nonpolar? Why?
3. How do you think polarity affects cohesion?

**Homework:** What are two other substances that you think would negatively affect the cohesion between water molecules? Why?