Determine the pH of Common Substances Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In this lab, we will measure the pH of some common substances. We will do this with litmus paper and with the pH meter.

In the following table, write the values of pH you determine for each substance, using litmus paper and the pH meter. Using colored pencils, draw the color indicated on the Litmus paper.

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| **TABLE 1 – pH of Common Substances** |
| **SUBSTANCES** | **pH****(pH meter)** | **pH(litmus p.)** | **COLOR(on pH paper)** |
| distilled water |   |   |   |
| tap water |   |   |   |
| rain water |   |   |   |
| soda water |   |   |   |
| vinegar |   |   |   |
| lemon juice |   |   |   |
| Coca-Cola |  |  |  |
| milk |   |   |   |
| baking soda (saturated solution) |   |   |   |
| ammonia  |   |   |   |
| shampoo |   |   |   |
| soap |   |   |   |

Write a lab report. Your lab report should include the following sections in order: Introduction, purpose, hypothesis, materials, methods, data/results, and conclusion.

**Introduction**- Act as if you are explaining pH to a person who has never heard of it. You should explain what pH measures and discuss the pH scale.

**Purpose**- Discuss what the point of the lab was. This can be included with the introduction, but you should have a sentence clearly stating the purpose of the lab.

**Hypothesis**- Form a hypothesis. You could hypothesize about which substance may be the most or least acidic, or about the accuracy of the Litmus paper or pH indicator. Choose a variable you’d like to form a hypothesis about.

**Materials**: List the materials did you use.

**Methods**: What steps did you take to complete the lab?

**Data/results**: The table above should be part of your data/results section. This section should also include an image/drawing of the pH scale that corresponds to your Litmus paper so the reader understands how you determined the pH using the paper.

**Conclusion**: Was your hypothesis rejected or did you fail to reject it? Why? Were your measurements of pH the same using the pH indicator and the paper? Why or why not? What were the 2 most acidic substances? What was the pH for each? Were you surprised by this? Why or why not? You should talk about the results here. These questions are just some ideas to lead you. You should talk about data that stood out to your or surprised you.