**Household Acids and Bases Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Introduction**

Indicators are used to determine the approximate acidity/basicity of solutions. In this lab, you will use an indicator made from red cabbage and use it to determine the relative acidity/basicity of various household substances. The cabbage juice indicator contains a molecule, anthocyanin, that accounts for the color changes.

**Objectives**

- Measure and compare the approximate acidity/basicity for various household substances.

- Compare the functions of the liquids to their chemical makeup.

|  |  |
| --- | --- |
| Indicator color | Relative pH |
| Bright red | Very acidic |
| Red | Moderately acidic |
| Reddish purple | Weakly acidic |
| Purple | Neutral |
| Blue green | Weakly basic |
| Green | Moderately basic |
| Yellow | Very basic |

**Materials**

Red cabbage Well plate Toothpicks

Pipets White paper Various household substances

**Procedure**

1. Set a clean microplate on a piece of white paper. Add 5 drops of each solution to a

 different well on the plate. **Use a different pipet for each solution**.

3. Using a clean pipet, add 5 drops of cabbage juice indicator to each of the solutions in

 the wells. Stir the solution in each well with a clean toothpick.

4. Looking down through the wells, note and record the color of each solution in a data table.

 Using the color chart, record the approximate acidity/basicity of each substance.

|  |  |  |
| --- | --- | --- |
| **Solution** | **Color** | **Acidity/Basicity** |
| Vinegar |  |  |
| Eye wash |  |  |
| Drain cleaner |  |  |
| Lemon Juice |  |  |
| Table salt |  |  |
| Baking Soda |  |  |
| Borax |  |  |
| Soap |  |  |