**Science 10 Chemistry Lab #2: Testing for Acids and Bases /17**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & Group members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Materials**

Depression plate pH paper red litmus paper blue litmus paper phenolphthalein

12 substances as listed below

**Directions**

1. Fill the wells with the 12 substances listed in the chart below. Keep the same order as listed below.
2. Test each substance with: red & blue litmus paper (bases turn red paper blue and acids turn blue paper red); pH paper and finally phenolphthalein (add ***one*** drop to each well).
3. Complete the table below. **12 points**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Substance** | **Red litmus paper** | **Blue litmus paper** | **Phenolphthalein**  **(Pink or no change)** | **pH paper (estimated pH)** | **Acid, base or neutral?** |
|  | **observations** | | | |  |
| 1. Diluted hydrochloric acid |  |  |  |  |  |
| 1. Diluted sodium hydroxide |  |  |  |  |  |
| 1. Distilled water (dH2O) |  |  |  |  |  |
| 1. Apple juice |  |  |  |  |  |
| 1. Club soda |  |  |  |  |  |
| 1. Window cleaner |  |  |  |  |  |
| 1. Vinegar |  |  |  |  |  |
| 1. Bleach |  |  |  |  |  |
| 1. Milk |  |  |  |  |  |
| 1. Dish soap |  |  |  |  |  |
| 1. Lemon juice |  |  |  |  |  |
| 1. Tums (add distilled water) |  |  |  |  |  |

**Analysis: 5 points**

1. Which substance was the strongest acid? How do you know? (1 pt)
2. Which substance was the strongest base? How do you know? (1 pt)
3. What is an example of an acid-base indicator? (1 pt)
4. A substance has a bitter taste and a slippery feel.
   1. What colour would litmus paper turn with this substance? (1 pt)
   2. What range of pH would we expect for this substance? (1 pt)
      1. pH 0-6.9 ii. pH 7 iii. pH 7.1-14
5. Arrange the 12 substances from least to most acidic. (1 pt)