

Ph lab report assignment



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By using a pH paper, indicator dyes and a pH meter, several tests will be conducted to check which one will result in a precise pH level reading.

Materials and Methods Ph Paper. Get 5 beakers and label them A through E.

Fill the beakers with 20 to 25 millimeters of the appropriate solutions and then cut a piece of pH paper at least one inch in length. Dip the pH paper into the solution and color coordinate with the pH chart it provides. Using indicator dyes. Get 2 sets of test tubes and label them A through E.

Fill the tubes with equal amounts of solution and then in only the first set of tubes, place 2 drops of Promptly Blue dye into each and make sure it mixes in well with the solutions. On the second set of tubes do the same but this time place 2 drops of Phenolphthalein into the solutions. PH meter. Get 5 small beakers and label them A through E. Half fill the small beakers with the appropriate solution as it was done with the prior experiment but this time a pH meter and a cabbage extract called intoxication will be used.

Before continuing, the pH meter needs to be calibrated. Once calibrated, measure the pH level of beaker A until the meter gives the result of the solution. Once finished with beaker A, place the sensor stick into water, wipe the stick by using a Kim- wipe before you could continue to beaker B. The washing of the sensor stick needs to be done before moving onto the next beaker for safety and to get an accurate reading. After testing all the beakers with the pH meter, add 2 drops of cabbage extract (intoxication) to each beaker and mix it well until there is a distinct color.

By the pH reading that the pH meter provided, determine which solution from beakers A through E is a base or acid. PH of household products. Half fill

7 small beakers with Sprite, Vinegar, Dish detergent, Baking soda, Ammonia, Coke and Orange juice individually and equally measured. Place 2 drops of color extract (intoxication) in each beaker and make sure it mixes in well until there is a distinctive color. By comparing the colors to table 1 and 2 determine if the solutions are acidic, basic or neutral. Buffer. All 50 ml of distilled water into two small beakers.

On one beaker, measure the distilled water with the pH meter and record the pH level. Carefully, added 1 drop of hydrochloric acid into the solution of distilled water until the pH dropped 1.0 pH unit on the pH meter. Then, I clean the pH meter sensor stick with water and a Kim-wipe. On the other beaker, place an Alkali-Seltzer tablet into the solution of distilled water and let it sit until it fizzes out. Use the pH meter to measure the solution and recorded the initial pH reading. Next, gently swirl the beaker and slowly add up to 20 drops of hydrochloric acid until the pH drops to 1.0 pH unit.

Results Solution Color WI Promptly blue Color with Phenolphthalein 6 Cloudy White 9 Blue Pink c 5 Yellow 2 11 Slightly Darker Blue Dark Magenta Table 1: Consists of pH levels of each solutions, the result when added indicator dye Promptly blue into solutions, and the result when added indicator dye Phenolphthalein into solutions. By using the pH paper to measure the solutions A through E it would point out what substance is an acid and which one was basic. Also, by adding Promptly blue and Phenolphthalein afterwards to the solution it would indicate what color it would turn to when mixed into an acid and a base.

Base 8. 93 Pastel green Neutral 7. 14 Very Pale Pink Acid/Base/Neutral pH Reading Color of Extract Acid 4. 26 Light Pink 2. 22 D Base 10. 05 Light green Table 2: Consists of color extract taken from a red cabbage for a natural indicator. The pH reading that was measured by using the pH meter and the result of the pH reading to determine whether the solution was acidic or basic. By first measuring the pH levels of solution A through E with a pH meter, it gives a numeric reading to pH balance to a solution.

Next, add in a natural indicator called intoxication made from the pigment from a red cabbage into each solution and mixed it until there is a distinct color and recorded on the chart. Finally, by looking at the result of the pH reading level that was given from the pH meter, it will determine which solution is basic or acidic. Pale Pink Sprite Color with Extract Vinegar Cloudy Pastel Green No Change Dish Detergent Baking Soda Lime Green Ammonia Orange Juice Stayed the same but cloudy Slightly Lighter Brown Coke Table 3: Consists of the color results after the color extract were added to the solutions.

Comparing the colors with other tables, the end result of the solutions being acidic, basic or neutral. By taking 7 small beakers and half filling it individually with the appropriate solutions, color extract was added to make out what color it will turn the solutions. This time, the tool of measurement to find out if the solutions were acidic, neutral or basic will not be pH paper or a pH meter. When given the color results, by the mixture of the solution and the extract, table one and two were used to determine which solutions were acidic, neutral or basic. Water 6. 48 3. 3 1 drop Beaker Initial pH Final pH Drops HCl Added Alkali-Seltzer 6. 56 6. 22 20 drops Table 4: Consists of pH <https://assignbuster.com/ph-lab-report-assignment-lab-report-samples/>

levels in distilled water solution and Alkali-Seltzer tablet in distilled water solution. Initial pH is the result of the reading from pH meter for both solutions and the final pH is the result from adding hydrochloric acid until pH drops 1.0 unit. By measuring the pH levels from the distilled water solution with the pH meter, it gives a numeric reading for water which becomes the initial pH. Next, by add a drop of hydrochloric acid and gently swirling the beaker until the pH meter dropped 1.0 pH unit, then use the reading for the final pH result. The beaker with Alkali-Seltzer tablet and the distilled water solution was measured for its pH level and recorded the reading for the initial pH. Then, 20 drops were added and gently swirling the beaker to mix the solution and the hydrochloric acid and wait until the pH meter dropped 1.0 pH unit. Finally, record the results in the final pH section. The pH scale. The pH scale goes from numbers 1 thru 14. One being acidic (acidosis) and fourteen being basic (alkaline). A pH of 7 is neutral.

Conclusion By using the pH paper, dye indicators and the pH meter as tools of measurement, it has helped to determine which is more precise for this study. The pH paper and the dye indicators have flaws because it could be subject to human error. Even though the pH paper has a color chart provided, there is some color difference from light to dark variation, (Ex. Light orange, red-orange to orange). The color chart gives you a number on where in the pH level it would land on but could be misread by human error. The dye indicators have the similar results to the pH paper.

This would be more attractive to human error because there is no color chart it could match to, so the human eye would be the judge to what color the solution turn to when the dye indicator were added. There are so many

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variation of one color it would be hard to determine what exact color the solutions transform to. The pH meter was the most precise tool of the three and it would give out the most precise measurements of the pH level of the substance. The pH meter is similar to a calculator or digital scale, enter the information and it does the calculation for the solution.