



Cabbage Juice Rainbow Data Sheet **Answers**

You have 10 cups with different solutions. First, predict the color change of each solution. Next, test each substance by pouring some cabbage juice in each cup until you see a color change. *Remember: Acids turn the cabbage juice more red, and bases turn the cabbage juice blue, yellow or green.* Calculate the average pH. Indicate whether the substance is an acid or base.

Solution	Predicted Color Change	Actual Color Change	Acid or Base?
Vinegar		more red	acid
Lemon Juice		more red	acid
Tomato/Apple Juice		more red	acid
Distilled Water		purple	neutral
Salt Water		more blue	base

Calculating Averages Example:

If $pH_1 = 5$, $pH_2 = 6$ and $pH_3 = 5$, then, the average $pH = (5 + 6 + 5) \div 3 = 16 \div 3 = 5.3$

Turn over for more →

Cabbage Juice Rainbow Data Sheet Answers, continued

Solution	Predicted Color Change	Actual Color Change	Acid or Base?
Bleach (ammonia)		greenish-yellow	base
Milk of Magnesia		green	base
Baking Soda		blue	base
Alka-Seltzer in Distilled Water		purple	neutral
Alka-Seltzer in Vinegar		purple	neutral

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