

What strength of hydrogen peroxide bleaches dark hair to the lightest shade?

M7-8-25 CHEMISTRY

Question

What strength of hydrogen peroxide bleaches dark hair to the lightest shade?

Abstract

In this experiment, we will be finding which strength of hydrogen peroxide bleaches dark hair to the lightest shade. The purpose of this is to find out what percent of hydrogen peroxide solution people with dark hair should use to take the color out of their hair. Our hypothesis is, If the strength of the hydrogen peroxide increases, then the color of the hair will be lighter because the higher the strength, the more hydrogen peroxide chemical there is.

We will be performing the following procedures:

- Fill up glass bowl with $\frac{1}{8}$ cup, 3% hydrogen peroxide solution.
- Put some hair into the liquid.
- Leave for 1 minute.
- Pull hair out.
- Take picture of the hair once dry.
- Repeat 9 more times.
- Repeat steps above with the 6%, 9%, and 12% solution.
- At the end of all repetitions, compare the pictures and create a conclusions based on the shade of the hair.

In this experiment, we proved our hypothesis correct with 10 trials. Our hypothesis was, if the strength of the hydrogen peroxide increases, then the color of the hair will be lighter because the higher the strength, the more hydrogen peroxide chemical there is. We found, through trials of soaking hair in different strengths of hydrogen peroxide for a controlled amount of time, that the 12% bleaches the hair to the lightest shade.

hypothesis

We predict that, if the strength of the hydrogen peroxide increases, then the color of the hair will be lighter because the higher the strength, the more hydrogen peroxide chemical there is.

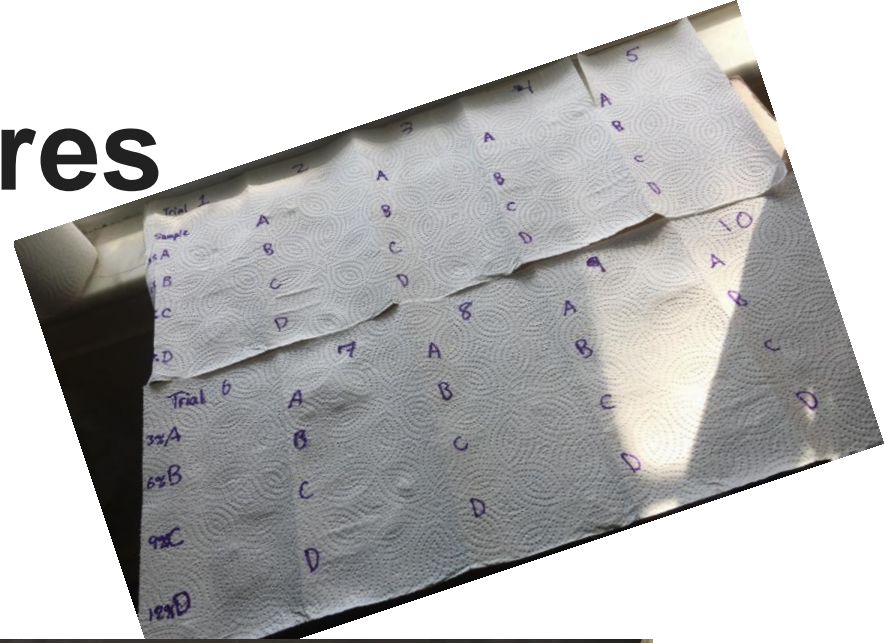
Materials

- Glass bowl
- 3% Hydrogen Peroxide
- 6% Hydrogen Peroxide
- 9% Hydrogen Peroxide
- 12% Hydrogen Peroxide
- Samples of hair
- Stopwatch.

Procedures

- Fill up glass bowl with $\frac{1}{8}$ cup, 3% hydrogen peroxide solution.
- Put some hair into the liquid.
- Leave for 1 minute.
- Pull hair out.
- Take picture of the hair once dry.
- Repeat 9 more times.
- Repeat steps above with the 6%, 9%, and 12% solution.
- At the end of all repetitions, compare the pictures and create a conclusions based on the shade of the hair.

Experiment Pictures



results

Strength of Hydrogen Peroxide	Trials									
	1	2	3	4	5	6	7	8	9	10
3%	Dark	Dark	Dark	Dark	Dark	Regular	Regular	Dark	Dark	Dark
6%	Regular	Regular	Regular	Light	Light	Regular	Regular	Regular	Regular	Regular
9%	Regular	Regular	Regular	Light	Light	Light	Regular	Light	Light	Regular
12% <input type="checkbox"/>	Light	Light	Light	Light	Regular	Light	Light	Regular	Light	Regular

conclusion

In this experiment, we proved our hypothesis correct with 10 trials. Our hypothesis was, if the strength of the hydrogen peroxide increases, then the color of the hair will be lighter because the higher the strength, the more hydrogen peroxide chemical there is. We found, through trials of soaking hair in different strengths of hydrogen peroxide for a controlled amount of time, that the 12% bleaches the hair to the lightest shade.

Works cited

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