

CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Project Number

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J2006

Project Title

Toilet Paper Absorbency

Abstract

Objectives

The objective of my experiment was to find out the most absorbent and most economical toilet paper brand. This indirectly illustrates the factuality of advertisements.

Methods

The materials you need to conduct this experiment are an eye dropper, colored water, four brands of toilet paper and a timer. To find the absorbency of the toilet paper I used an eye dropper to drop 1 ml of the colored water onto the rolled up toilet paper. I waited 25 seconds before unrolling the toilet paper. I then counted the number of markings, the least amount of markings is the most absorbent because it can catch the most liquid before it can drain through.

In this experiment I also wanted to find the most economical toilet paper brand, being the combination of cheapest and most absorbent. I gave the most absorbent brand 4 Points, the second most absorbent 3 Points etc. I did the same for cost, by first calculating the cost per foot of paper, then giving the cheapest cost per foot 4 Points etc.

The total score will be the rank of most economical from high to low.

Results

Kirkland Signature was my control, it averaged 9 ? layers that the liquid passed through. It costs 0.44 cents per foot. Value corner had a mean of 11 layers absorbed, it was the least absorbent of all of the brands. Angel Soft had an average absorbency of 8 ? and the cost per foot was 0.93 cents. Lastly, Charmin Ultra Soft had the most expensive cost per foot at 1.71 cents and had an average absorbency of 9 layers absorbed.

Conclusions

I found out that the most absorbent toilet paper brand is Angel Soft and the most economical brand is a tie between Kirkland Signature and Angel Soft. This retains to my objective because I did find the most cost-efficient and the most absorbent toilet paper brand. Through this experiment, I have learned that advertisements can not always be trusted, and may want to mislead you in order for you to buy their product.

Summary Statement

I measured the absorbance and cost efficiency of 4 brands of toilet paper and found Angel Soft was the most absorbent and tied with Kirkland for best cost efficiency.

Help Received

I designed and conducted the experiment by myself.