

Laundry Detergent Feasibility Study



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Executive Summary

This feasibility study analyzes three different types of laundry detergents, so we can make a recommendation to UNT students on which detergent is a better buy. The three types of laundry detergents we analyzed in this study include the following: Gain, Tide, and Surf. We analyzed these three brands based upon affordability, quantity of detergent offered, softness of the fabric after washing the fabric with the specific detergent, scent of the fabric after washing the fabric with the specific detergent, and the level of cleanliness the detergent has on the fabric.

In our methods of evaluation section we discuss the specific steps we took in order to be able to analyze which laundry detergent brand was a feasible buy for UNT students. The method of evaluation section includes a detailed explanation of how we gathered our data, and information about the surveys we gave to UNT students. In our results of evaluation section, we identify the results generated from our research and survey method. In our analysis of evaluation section, we analyze the data from the results section and we compare and contrast each criteria result and each option's result. Lastly, in our recommendation section, we recommend which brand of laundry detergent is a better buy for UNT students. Based upon all of our research and the data we gathered, we recommend Tide laundry detergent.

Introduction

This is a feasibility study on laundry detergents for UNT students, so they know the preeminent option for their laundry detergent. We picked three popular, nationally recognized brands found in a local Walmart in Denton, Texas. The three brands are: Gain, Tide, and Surf. We evaluated the three brands with five criteria: affordability, quantity, scent, softness, and cleanliness. We hypothesize Tide will be the winner, because of Tide's effective and prolific marketing campaign. The methods of evaluation will explain how and where we conducted our survey and research, our sample size, and the specific questions we asked our surveyees. The results of evaluation will explain which brand won in which criteria, as well as provide a graph and table to show how the points and percentages show the top detergent.

Methods of evaluation

In order to determine which type of laundry detergent UNT student's purchase, we studied three types of laundry detergents and we evaluated their popularity based upon five criteria. We evaluated three brands of laundry detergent, because the three brands were popular amongst UNT students.

The three types of laundry detergents include the following:

- Gain
- Tide
- Surf

The five criteria we used to evaluate the laundry detergents include the following:

- Price of the laundry detergent (Affordability)
- Amount of detergent given for the price (Quantity)
- Scent of the fabric after using the laundry detergent
- Softness of the fabric after using the laundry detergent
- Cleanliness of the fabric after using the laundry detergent

In order to determine which detergent brand was more affordable, we took a trip to a local Walmart with the following location: 2750 W University Dr. Denton, TX. During our trip to Walmart, we found the following prices for 150 oz of powdered detergent for each brand:

- Gain cost \$14.97 for 150 oz
- Tide cost \$17.97 for 150 oz
- Surf cost \$10.97 for 150 oz

Who was the target Market?

We conducted a survey that included a market of 30 UNT students. We gave each student a survey with fourteen questions regarding the use of laundry detergent. Before handing out the surveys, we asked if the students shopped at Wal-Mart, because Wal-Mart is a huge retailer with mass distribution. Therefore, we inferred that the majority of UNT students shop at Wal-Mart. Although we realized there are multiple sellers of laundry detergent, we had to create a small niche in order to be able to evaluate the answers. The niche included students at UNT who shop for laundry detergent at Wal-Mart due to the fact that there are two huge Wal-Mart centers in Denton, Texas. Also, we required our surveyees to have previously purchased all three brands of laundry detergent. By asking them if they have previously purchased all three brands, we were able to develop a conclusion about which brand is most popular amongst UNT college students.

When and where was the survey given?

Initially, we took the survey to our classes. We then realized that the answers were biased and we needed to gather non-biased answers that we could evaluate. Therefore, we decided to take a new survey to the library mall located on the UNT campus. We stood at the library mall, on the UNT campus, near the pond at exactly 2:00 p.m. CST on Thursday, April 24, 2014. We then asked students walking around if they could take the survey, if and only if they had previously purchased all three laundry detergent brands from a local Wal-Mart. It took us approximately two hours and thirty-seven minutes to

gather thirty surveys. Students rejected our survey multiple times because they were either rushing to class, or because the students failed to meet our criteria of having purchased all three types of detergent brands from a local Wal-Mart.

What was the criteria value of the survey?

The first question we asked on the survey pertained to the preference of the three types of laundry detergent. Next, we asked the students how much they spent on average on laundry detergent. We then made the following generic statements for each type of detergent and asked the surveyee to rate them on a scale of 1 to 5:

- Gain gives a reasonable amount of detergent for the price.
- Tide gives a reasonable amount of detergent for the price.
- Surf gives a reasonable amount of detergent for the price.
- Gain leaves the softest texture.
- Tide leaves the softest texture.
- Surf leaves the softest texture.
- Gain leaves a great scent after washing and drying the fabric.
- Tide leaves a great scent after washing and drying the fabric.
- Surf leaves a great scent after washing and drying the fabric.
- Gain removes all types of stains from the fabric after washing the fabric.
- Tide removes all types of stains from the fabric after washing the fabric.
- Surf removes all types of stains from the fabric after washing the fabric.

Three of the criteria were opinion-based. The scent of the fabric was an opinion-based answer because everyone prefers different scents. The softness of the fabric was also an opinion-based answer because people prefer different types of softness. The last opinion based answer was the cleanliness of the fabric, since everyone determines hygiene levels differently.

The scale we used included the following:

- **Number 1 represented “Strongly Disagree”**
- **Number 2 represented “Disagree”**
- **Number 3 represented “Neither Agree Nor Disagree”**
- **Number 4 represented “Agree”**
- **Number 5 represented “Strongly Agree”**

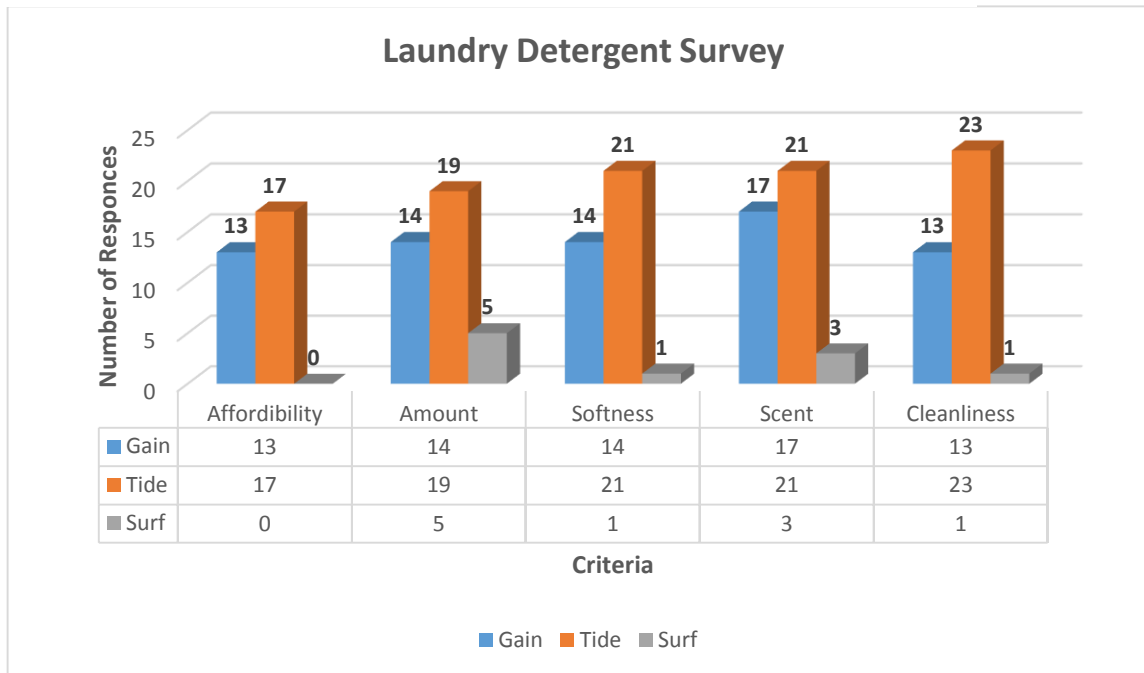
How was the survey answers averaged?

When we averaged the answers for all of the surveys, we had the following criteria. If the answers had a four or a five, we gave that detergent brand one point for that question. We then made a table with the questions on the independent axis (left-hand column) and the points on the dependent axis (right-hand column). We added all the points at the end and we made a table of total percentages. The higher the percentage for a particular criterion, the better the brand was for that designated criteria. For example, if Gain had the highest percentage for the softness criteria, it means Gain is more popular for leaving soft fabric as opposed to Tide and Surf. Therefore, Gain is more popular for its softness.

Results of evaluation

To determine the feasibility of laundry detergent, we evaluated three options according to the criteria of affordability, amount, scent, softness, and cleanliness.

Figure 1: Graph of Brands and their Points



Affordability of the laundry detergent

Option 3, Surf, is the most affordable. Option 1, Gain, is the least affordable.

Option 1: Gain

Gain's largest jug of detergent claims to allow up to 72 loads. The 150 ounce jug costs .28 cents per ounce. The price for Option 1 is \$41.50.

Option 2: Tide

Tide's largest jug of detergent claims to allow up to 96 loads. The 150 ounce jug costs .21 cents per ounce. The price for Option 2 is \$32.50.

Option 3: Surf

Surf's largest jug of detergent claims to allow up to 120 loads. The 150 ounce jug costs 0.07 cents per ounce. The price for Option 3 is \$10.99.

Amount of detergent for the price

Option 3, Surf, gives the customer the most amount of detergent for the price. Option 1 gives you the same amount of detergent for a higher price.

Option 1: Gain

Gain's 150 ounce jug costs .28 cents per ounce. However, Gain's 150 ounce only allows up to 72 loads. An average person will wash 300 loads per year. With Option 1 an individual will spend around \$166 on laundry detergent per year.

Option 2: Tide

Tide's 150 ounce jug costs .21 cents per ounce. Due to Tide's excellent branding strategies we believe the consumer prefers Tide. An average person will wash 300 loads per year. With Option 2 an individual will spend around \$130 per year.

Option 3: Surf

Surf's 150 ounce jug costs 0.07 cents per ounce. The 150 ounce detergent allows up to 120 loads. An average person will wash 300 loads per year. With Option 3 an individual will spend around \$43.96 on laundry detergent per year.

Scent of the fabric after washing with the laundry detergent

Option 1, Gain, offers the widest range of scents. Option 2, Tide, offers the least amount of scents. This criterion was opinion-based.

Option 1: Gain

The company that produces Gain laundry detergent claims that their detergent leaves your fabrics smelling fresh and clean. The company started with an original scent and then continued to add on 16 new scents. With Option 1 the customer will have a wider range to choose from.

Option 2: Tide

Tide laundry detergent offers the least variety of scents. Tide offers an original scent in a variety of their products. Option 2, Tide, will give the consumer a variety of fabric care products with one original scent.

Option 3: Surf

Surf laundry detergent offers a large variety of scents. The scents include original and 16 other tropical scents. Option 3, Surf, will provide the customer a wide range to choose from.

Softness of the fabric after washing with laundry detergent

Laundry detergents contain main ingredients such as Alchoholethoxy sulfate, Borax, Linear Alkyl benzene Sulfonate, Ethanolamine, and Citric acid. Sulfates fight stain and grease in fabric creating a softer feel after washing. Washing detergents that contain Alchoholethoxy sulfate as a main ingredient opposed to Borax leave a softer fabric. Both Options 1, Gain, and Option 2, Tide, leave a softer texture than Option 3, Surf.

Option 1: Gain

Gain offers a variety of products, including fabric softener. Most of their products include the softening ingredient. With Option 1, consumers will get an expensive fabric softening detergent.

Option 2: Tide

Tide offers mainly laundry detergent. All of their products include the softening ingredient. With Option 2, consumers will get a fabric softening detergent for a median price.

Option 3: Surf

Surf only offers laundry detergent. Their detergents include Alchoholethoxy sulfate. Since Option 3 is most economical, Option 3 would be good for an individual who cares little for the softness of their fabric.

Cleanliness of the fabric after using the laundry detergent

Sulfates fight stain and grease in fabric creating a cleaner appearance after washing. Washing detergents that contain alchoholethoxy sulfate as a main ingredient as opposed to Borax, leave a cleaner fabric. Option 1, Gain, and Option 2, Tide, leave a cleaner appearance than Option 3, Surf.

Option 1: Gain

Option 1, Gain, includes the stain fighting ingredient at a higher concentration. Due to the high concentration of the stain fighting ingredient, the consumer will use less detergent to see an effective change in fabric. Option 1 would be a great product at the most expensive price.

Option 2: Tide

Option 2, Tide, includes the stain fighting ingredient at a higher concentration. Due to the high concentration Tide would be able to perform the same job as Gain at a price cheaper to the consumer. Option 2 would offer a cleaner fabric at median price.

Option 3: Surf

Option 3, Surf, includes the stain fighting ingredient as well. When using Surf you may have to use more of the product to get the same results as a more expensive detergent. Although Option 3 is the most affordable, you may end up spending more money due to the short longevity of the detergent.

Figure 2: Table of Points and Percentages for Each Brand

	Gain	Tide	Surf	
Affordability	13	17	0	
Amount	14	19	5	
Softness	14	21	1	
Scent	17	21	3	
Cleanliness	13	23	1	
Totals	71	101	10	= 182
Percentages	39.01%	55.49%	5.49%	

Conclusion

Tide won in all the criteria with 55.49% of the points, Gain come in second with 39.01% and Surf came in last with 5.49%. Even though surf offers the same amount of product at a lower price, students seem to find Tide to be worth spending the extra money. In amount of product students picked Tide as offering more product at a set price. Tide gives the fabric the softest texture after washing. Gain and Tide follow the same basic detergent formula, but tide contains a higher amount of the compound that softens fabric. The scent of the fabric after washing proved to be important to our surveyees, and they spent some time on this question. After adding up the points, Tide won in the scent criteria. Cleanliness also proved to be important with Tide winning by a large margin.

Our original hypothesis was correct. Students preferred Tide over the other options, because Tide is more recognizable with many surveyees commenting on Tide commercials and the detergents many virtues.

Recommendation

We recommend UNT students purchase Tide Laundry Detergent, because Tide is worth the extra money, makes the softest fabric, leaves the freshest scent, and produces the cleanest clothes.