

**Consumer Decision Making Contest
2001-2002 Study Guide
Paper Towels**

In the early 1900s, Arthur Scott was head of a paper products company in Philadelphia, Pennsylvania, (which is now Kimberly-Clark) and he had big problem. One day, he received an entire railroad car full of paper at his plant that wasn't good for anything. The paper had been rolled too thick for toilet tissue, its intended purpose. So, what we he supposed to do with all of this paper?!? Fortunately, Scott heard about a local school teacher who had developed a novel idea to help fight colds in school. Instead of asking students to use the roller towels in the school restrooms to dry their hands, she gave every runny nosed student a small piece of soft paper to use. That way the roller towel in the toilets would not become contaminated with germs. Aha! Scott decided he could make "paper towels" from all that paper in his warehouse and try selling them. He made perforated rolls of "towels" thirteen inches wide and eighteen inches long. And, thus, paper towels were created.

It took many years before paper towels became popular with consumers and began replacing cloth towels in the kitchen. And, it's taken even longer for them to come in the variety of patterns that are now available. What a major industry from such humble beginnings!

Process of Making Paper Towels

Paper towels are made from trees that are processed into pulpwood. Long fibers from softwood trees, such as pine and spruce, are most commonly used. After debarking, the pulpwood is turned into chips that are cooked. The natural "glue" which holds the fibers together is removed, leaving a fibrous pulp mixture. The pulp then goes through a series cleaners and screens. Bleaching the paper fibers during this step tends to make it more absorbent and white in color. While bleaching is a common practice, it is not necessary and some manufacturers today are opting to reduce or eliminate this step. Once the pulp has been processed, it goes through a high-speed paper machine and a translucent substance called resin is added to the mixture to strengthen the paper when it is wet. The water is removed and the fibers bond to form sheets of paper. Two layers of paper are combined with a thin layer of adhesive and embossed to form many tiny air pockets that rapidly attract moisture. Shapes such as diamonds or circles are pressed into the paper to give a quilted patten than improves its ability to hold moisture. Designs made with water-based printing inks are added to some rolls creating the wide selection of towels available today. (For additional information about the papermaking process, visit <http://www.wipapercouncil.org> .)

While the basic process of making papers towels is the same for all brands, it does not mean that all paper towels are the same. Products can vary based on absorbency, reusability, cost, packaging, number of sheets and the number of plys. As with any consumer good, higher priced paper towels do not necessarily guarantee better quality.

Absorbency

There are two significant processes which affect paper towel absorbency. The first is creping, which gives the towel flexibility and stretch by lowering its and creating more open areas for water to enter. The second is embossing during the converting process, which develops a “void area” between the two tissue plies, allowing it to hold more water.

Reusability

In addition to being absorbent, a good paper towel should be strong, durable and hold together while you use it. Having the right amount of wood fibers in the paper gives the towel the right structure and makes it substantial enough to perform well.

Some of the newer innovations in paper composition make it possible to wash or rinse the towel and use it multiple times whereas earlier versions of the paper towel guaranteed limited endurance.

Cost, Packaging and Number of Sheets

These three factors are closely related and it pays to read labels to determine the best buy. When selecting a paper towel, find a hard role towel whenever possible. Some manufacturers may “puff up” their products with air so they look the same in diameter but offer fewer sheets per roll. Because the size of the role may be deceiving, it is better to look at the weight or the number of sheets per package. You can easily divide the cost of the towels per sheet to compare the unit price.

In addition, packaging that is printed with safer soy-based inks tends to be more environmentally friendly. Whenever possible, you may get more for your money and reduce the waste from packaging by buying in bulk.

Number of Ply

Paper towels come in both one and two ply, which means they are either one or two layers thick. Two-ply paper towels tend to be stronger, more absorbent and more substantial than one ply towels, but they may also be more expensive. Choosing one type of towel instead of the other would depend upon your intended use of the product and the desired results.

Use of Paper Towels

In addition to cleaning and wiping up spills, paper towels are often utilized for a variety of purposes such as use in the microwave or in place of coffee filters. Consumers should be cautious about using paper towels carelessly. Improper use of any paper product in microwave or conventional ovens, including paper towels, can result in fire. While most manufacturers do not recommend using paper towels in conventional ovens, they do suggest using their white towels for food preparation and microwave cooking. On the other hand, they do not generally recommend using paper towels to dry herbs or flowers in the microwave due to the length of time that is required for drying. In addition, they encourage consumers to use printed paper towels only for general cleaning purposes. Some producers package both white and printed papers in bulk to give the consumer greater flexibility.

Keep in mind, paper towels are manufactured primarily for cleaning purposes. Therefore, they are not perfect substitutes for coffee filters or other such uses. Because they are made from wood fibers, most opticians do not recommend using them to clean glasses

References

Georgia Pacific <http://www.gp.com>

Bounty Paper Towels <http://www.bountyfamily.com>

Proctor and Gamble <http://www.pg.com>

Prepared by Sue Lynn Sasser, Extension Family Economics Specialist, January 2001