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### A Feasibility study of a recycled paper scoop, a dosing device for synthetic powder laundry detergents

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**A FEASIBILITY STUDY OF  
A RECYCLED PAPER SCOOP, A DOSING DEVICE  
FOR SYNTHETIC POWDER LAUNDRY DETERGENTS**

**By  
Patrick Seo Thin Lee**

**A THESIS**

**Submitted to  
The Department of Packaging Science  
College of Applied Science and Technology  
Rochester Institute of Technology  
Rochester, New York**

**In partial fulfillment of the requirements  
for the degree of**

**MASTER OF SCIENCE**

**1993**

Department of Packaging Science  
College of Applied Science and Technology  
Rochester Institute of Technology  
Rochester, New York

**CERTIFICATE OF APPROVAL**

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**M.S. DEGREE**

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The M.S. Degree thesis of Patrick S.T. Lee  
has been examined and approved  
by the thesis committee as satisfactory  
for the thesis requirements for the  
Master of Science Degree

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Date: August 10, 1993

Thesis Release Permission

**ROCHESTER INSTITUTE OF TECHNOLOGY  
COLLEGE OF APPLIED SCIENCE AND TECHNOLOGY**

Title of Thesis: **A FEASIBILITY STUDY OF A RECYCLED PAPER  
SCOOP, A DOSING DEVICE FOR SYNTHETIC  
POWDER LAUNDRY DETERGENTS**

I, Patrick S.T. Lee, prefer to be contacted each time a request for reproduction is made. I can be reached at the following address,

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Patrick S.T. Lee

Date: August 10, 1993



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## ABSTRACT

### A FEASIBILITY STUDY OF A RECYCLED PAPER SCOOP, A DOSING DEVICE FOR SYNTHETIC POWDER LAUNDRY DETERGENTS

By

Patrick S.T. Lee

This research assessed the consumer acceptance of a recycled paper scoop versus the existing polystyrene (PS) scoop as a dosing device for synthetic powder laundry detergents. Specifically:

- (1) Were the consumers aware of and in agreement with the environmental benefits of a recycled paper scoop versus the current plastic scoop?
- (2) Did consumers consider a recycled paper scoop as an acceptable replacement for the current plastic measuring scoop?

The implementation of a recycled paper scoop would reduce packaging waste by approximately 20% by weight and a significant source reduction through decreased consumption of raw materials. Additionally, it would provide a substantial cost savings of approximately \$30M USD annually.

The recycled paper scoop consisted of 50% of post industrial (external) recycled fibres, 40% of post consumer recycled fibres and 10% of virgin fibres and internal waste sources. The 10% virgin fibres and internal sources was used to help increase the board strength and improve printability. The TAPPI (1989) test methods were used in the selection of the paperboard grades in meeting the performance requirements of the paper scoop application.

***The results of the home performance test indicated that a recycled paper measuring scoop was not an acceptable replacement for the plastic measuring scoop.*** Although there were positive ratings on the recycled paper scoop, they related to generalities and environmental preference. The recycled paper measuring scoop cannot substitute several aspects of the plastic scoop, specifically, the technical functionality, durability, rigidity and utility.

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## ***ABBREVIATIONS/ACRONYMS***

**P&G:** Procter & Gamble Inc.

**AQL:** Acceptable Quality Limit.

**CCME:** Canadian Council of Ministers of the Environment

**Cdn:** Canadian.

**EPA:** Environment Protection Agency

**g:** Gram

**L:** Litre.

**LILY CUP:** Lily Cup™

**NAPP:** National Packaging Protocol

**MSW:** Municipal Solid Waste

**PS:** Polystyrene.

**RQL:** Rejectable Quality Limit.

**SPIT:** Single Product Identified Test.

**TAPPI:** Technical Association of the Pulp & Paper Industry



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## ***INTRODUCTION***

Plastic detergent plastic measuring scoops (Figure 1) were first introduced in Canada in the 12 L Tide carton in Fall 1986, and are considered a factor in 12 L volume growth experienced through 1987. In Fall 1988, P&G Canada re-sized the synthetic detergents to 5 and 10 L (versus 6 and 12 L, previously), making both sizes "scoopable" with a scoop packed in every box. These plastic measuring scoops are made from virgin polystyrene for their durability and functionality. They will not collapse during usage or when wet. Importantly, they will last long enough for consumers to finish several boxes of detergents before they start deteriorating. Competition followed this move, making scooping boxes the standard in Canada. Based on previous use-testing and recent business growth, we believe that this package reconfiguration has led to an increase in per-load consumption and, as a result, product acceptance.

Canadian consumer concern for environmental issues has increased sharply in recent years, particularly in the area of packaging and solid waste. Beginning in March 1990, we observed a negative reaction to plastic measuring scoops in every box in consumer comments (Figure 2, & Table A-1), to the point where environmental concern for scoop accumulation and disposal is the largest comment area on the leading detergent brand, Tide.

In response to this environmental concern of scoop accumulation and disposal, an engineered paper, a recycled, measuring scoop (Figure 3) was developed and put into package design research. The design of a paper scoop is similar to the existing plastic scoop. They both have the same diameter with exception of the height. To further reduce equipment implications, a 12 oz drinking cup stock tooling was used to form a prototype and sample. The purpose of this research was to evaluate *consumer acceptance of a recycled paper scoop versus the existing polystyrene scoop as a measuring scoop for all P&G powder laundry detergents*. A Home Performance test, SPIT (Single Product Identified Test) was conducted to validate design and assess consumer reaction to a recycled paper measuring scoop. Environmental issues such as friendliness, solid waste reduction, scoop durability and functionality were also evaluated.

The research did not intend to discuss the methodology of closing the paper and plastic recycling loop, the qualification of the recycler and collector of paper/fibre, nor the "Life Cycle Analysis" of paper and plastics.

Figure 1: Virgin Polystyrene Measuring Scoop





**Figure 2: Consumer Comments for Scoop In-Packing in Tide -1991**

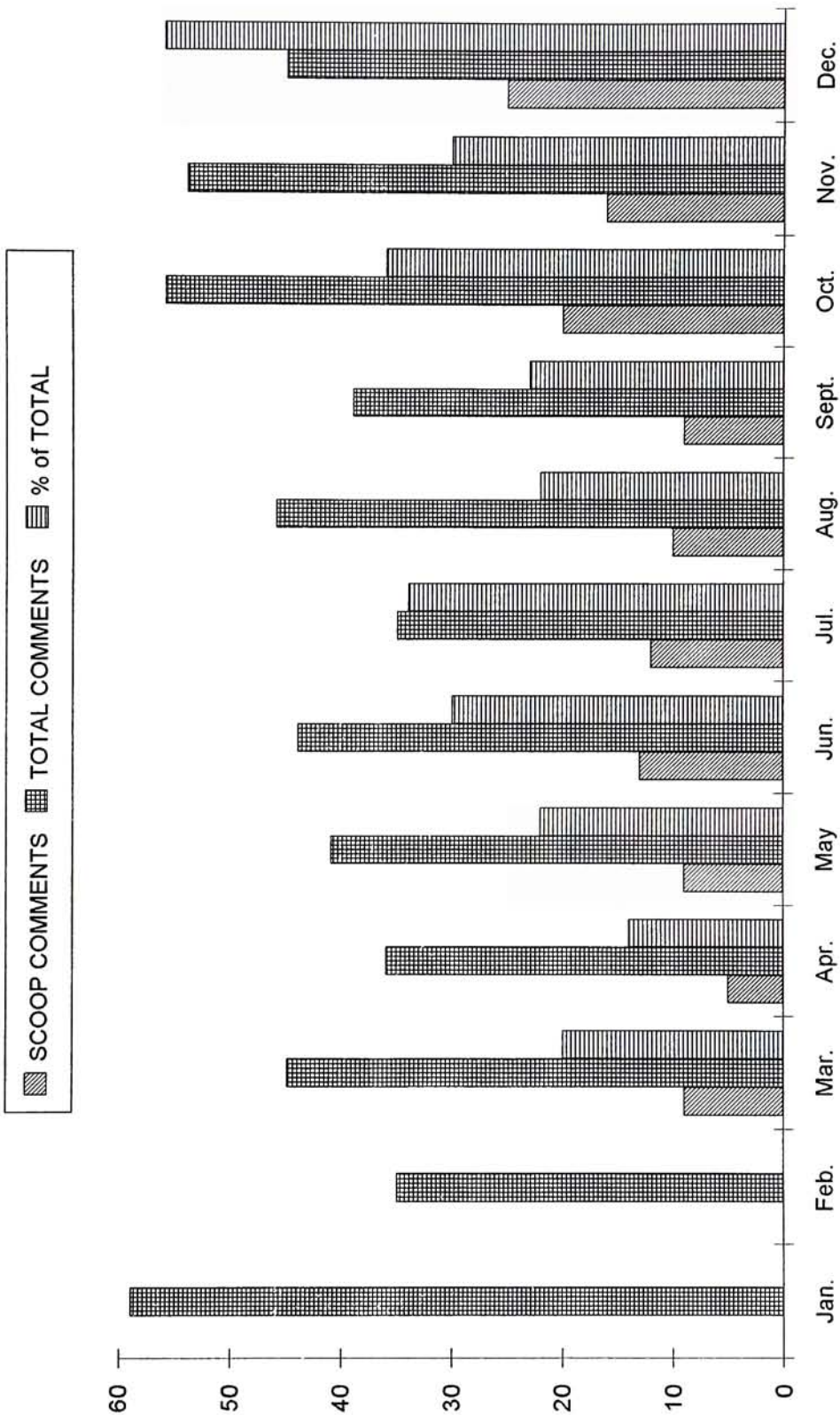
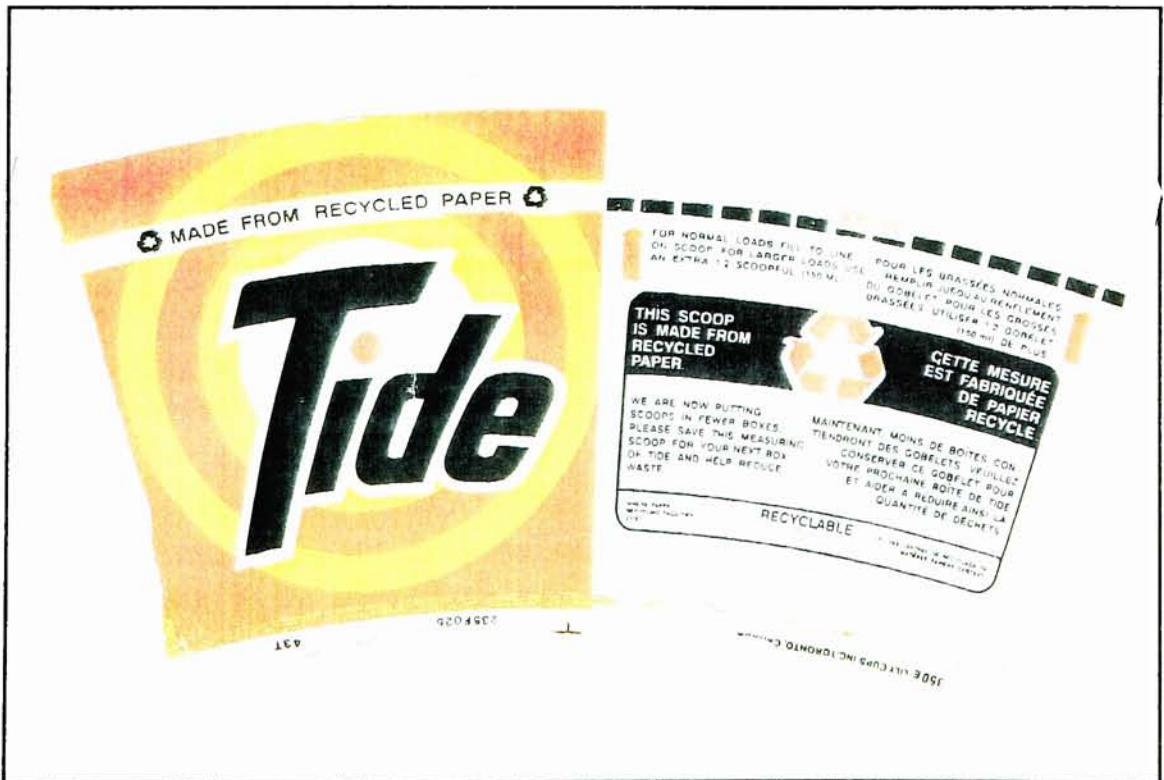
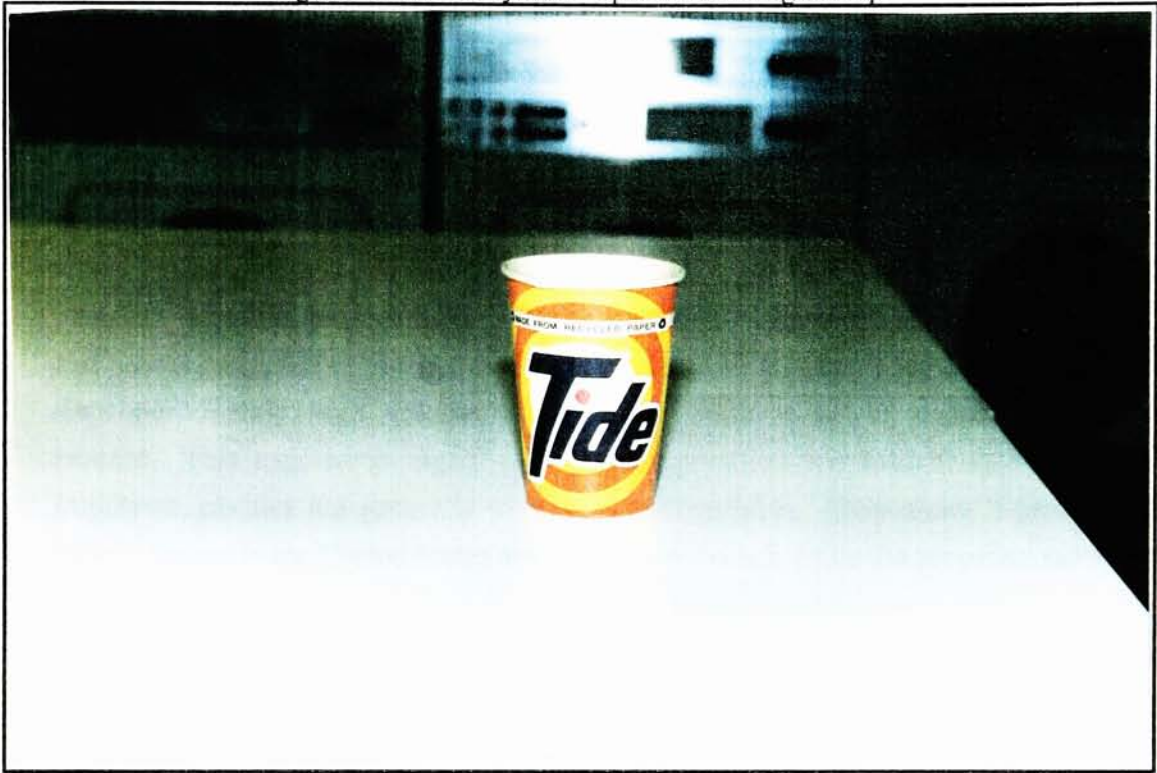


Figure 3: The Recycled Paper Measuring Scoop



# ***1 / PACKAGING MATERIALS AND OUR ENVIRONMENT***

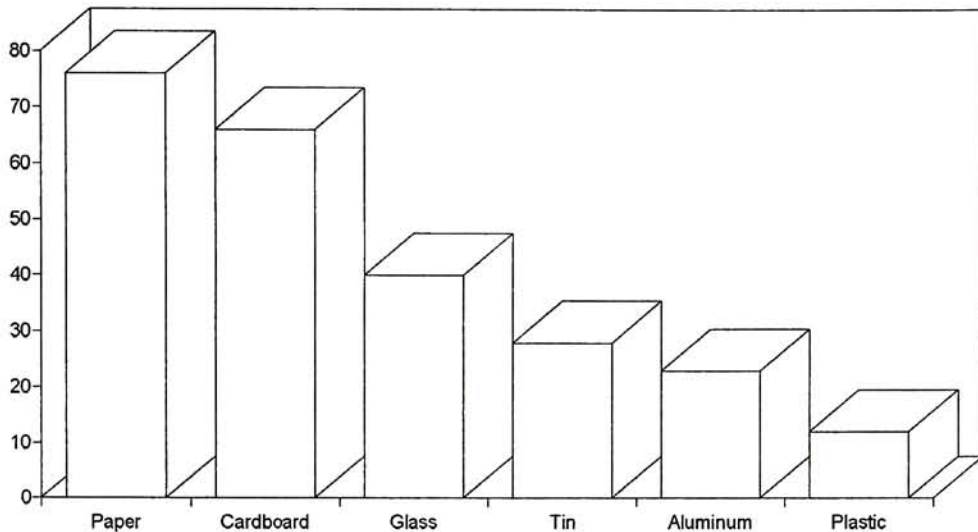
## **I. MUNICIPAL SOLID WASTE (MSW)**

Packaging is undoubtedly the largest and by far the most visible component of municipal solid waste (MSW). It accounts for almost one-third of municipal solid waste. The packaging material that is usually considered the worst offender is plastics. After all, plastics have been the fastest growing packaging material by far and now account for 11 percent of packaging waste by weight. They also constitute a disproportionately high volume of municipal solid waste of approximately 20 percent. This resulted in higher costs in transportation and landfilling. But most important, plastics are generally viewed as unrecyclable. Only about 2 percent of plastic wastes in the United States are presently recycled, while the recycling rates for the other major materials used in packaging such as paper, glass and metals all exceed 15 percent (Stone et al., 1992). These findings are consistent with National Household Garbage Disposal Habits (Table A-2), Attitudes and Concerns Study (P&G, 1991) conducted by P&G Canada. Canadian Attitude study showed that plastic packaging material ranked lowest for being safe for the environment (12%) while paper ranked highest for being safe for the environment (76%). The same study also indicated that plastics ranked considerably lower than paper for being recyclable (48% vs. 94%). **In most respects consumers *perceive* paper packaging material to be more environmentally friendly than plastics (Figure 4).**

The fact of the matter is that it does not have to be that way. To be sure, plastics recycling does present some difficult technical problems. But these obstacles are no longer so formidable. Advances in plastics recycling have been taking place at a truly astounding rate. As a result, it is now technically feasible to recycle the bulk of plastic used in packaging, and in most cases it is economically viable as well. Recent study, conducted by Franklin Associates, Ltd., reports the good news that packaging material recycling efforts have succeeded in reducing packaging's share of MSW dramatically in the 1985-1990 period. Fully 26.2% (Miyares, B., 1991) of the packaging waste created in 1990 was kept out of landfills because of recycling programs.



**Figure 4: Packaging Materials - Safe for Environment.**



## II. CANADA'S NATIONAL PACKAGING PROTOCOL(NAPP)

In April 1989, Canadian Council of Ministers of the Environment (CCME) recognized the magnitude of the waste management problem in Canada and set a goal of 50 per cent reduction in waste generation by the year 2000. In order to address this problem, CCME commissioned a National Task Force on Packaging to develop a national policy for the management of packaging. After preparing an extensive technical data base on packaging and conducting Canada-wide consultations, the Task Force recommends six packaging policies for Canada. The protocol is endorsed by Canadian Environment Ministers in March 1990.

The six packaging policies (NAPP, 1990) constitute a plan of action, with specific waste reduction targets and schedules, that will reduce the burden of packaging waste through three achievable targets: 20 per cent in 1992, 35 per cent in 1996, and 50 percent by the year 2000.

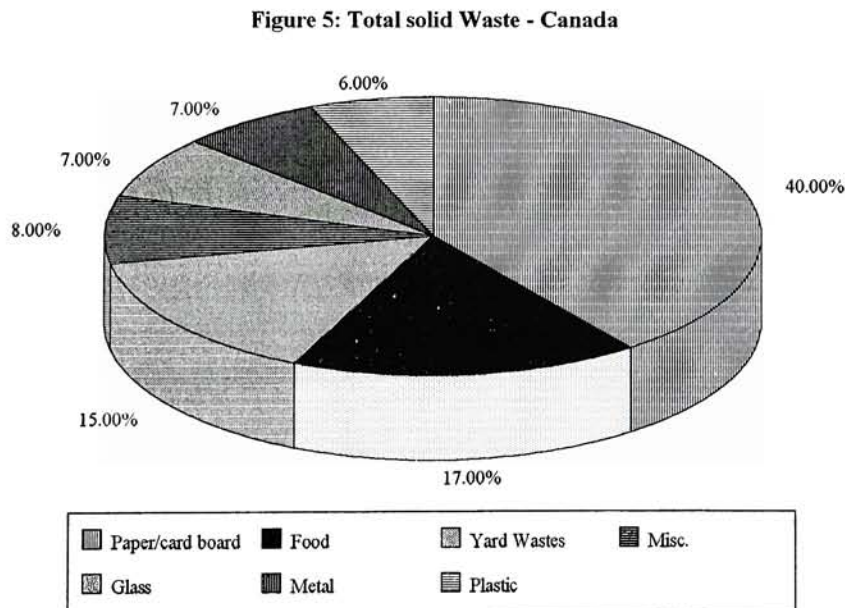
To meet the milestone targets, the NAPP recommends six policies for Canada:

Policy 1: All packaging shall have minimum effects on the environment.

- Policy 2: Priority will be given to the management of packaging through source reduction, reuse and recycling.
- Policy 3: A continuing campaign of information and education will be undertaken to make all Canadians aware of the function and environmental impacts of packaging.
- Policy 4: These policies will apply to all packaging used in Canada, including imports.
- Policy 5: Regulations will be implemented as necessary to achieve compliance with these policies.
- Policy 6: All government policies and practices affecting packaging will be consistent with these national poliices.

### III. P&G CANADA SOLID WASTE POLICY

Figure 5 below depicts the total municipal solid waste in Canada (Franklin Asso., 1992). Despite the fact that solid wastes contributed by plastic packaging materials represent only 6% of MSW volume, it is P&G's commitment to minimize the impact of its products and packages, and their manufacture, on the environment and on solid waste disposal. There is no single solution and an integrated approach covering all aspects of waste management needs to be employed.





In Canada, the current municipal solid waste stream is disposed of mainly in landfill, with small percentages being incinerated and recycled. P&G is committed to contributing meaningfully to both the short and long term goals being developed by governments at the Federal and Provincial levels.

P&G takes the following positions with regard to solid waste management and in this order:

- A. **Source Reduction:** Improvement in product, package design, or manufacturing processes to minimize the amount of solid waste generated.
- B. **Recycle, Reuse:** Encourage recycling to reduce volume of materials going to landfill or incineration.
- C. **Incineration:** Support incineration through state-of-the-art technology.
- D. **Landfill:** Ensure that our products and packages do not release harmful chemicals and strive to develop products/packaging that can be compacted.

## ***2 / RECYCLED PAPER MEASURING SCOOP***

### **I. WHY RECYCLED PAPER?**

Recent technological advances allow most plastic to be recycled. However, the infrastructure to facilitate collection, reclaim and end-user markets for polystyrene has not yet been fully established. Despite the fact that curbside disposal collection, the blue box program, has already been started in many Canadian municipalities, the recycling program for polystyrene is still far behind the recycling program for paper. Importantly, Canadians ranked plastic lowest for being safe for the environment (12%) and considerably below other materials for being recyclable (48 vs.74-94%). As a result, paper was selected as the lead candidate for replacing the existing plastic measuring scoop.

Recycled paper is commonly used in the packaging field, particularly in the corrugated container and paperboard folding carton industries. In the past, paper drinking cups were not constructed from recycled paper due to its unacceptable strength, and compatibility with production equipment, and food and drug regulations. However, with technological advancement in paper cup processing, it was believed that a robust paper cup could be made for detergent dispensing applications while maintaining compatibility with packing equipment. It was also believed that the recycled paper measuring scoop would address consumer environmental concerns regarding solid waste and meet consumer functional needs. The utilization of the recycled paper scoop would reduce the solid waste by approximately 18% in weight versus the existing plastic scoop as well as contribute to cost savings of approximately Cdn \$35,000 annually. As a result, we had initiated the development worked with LILY CUP to develop a recycled paper scoop with no plastic-coat. Plastic-coat substrate is insoluble and tends to accumulate in reclaiming equipment, eventually causing screen plugging, and other operating difficulties. The plastic-coat was therefore eliminated to enhance recyclability and to maximize source reduction.

## II. EXPERIMENTAL DESIGN OF THE RECYCLED PAPER SCOOP

A. **Success Criteria:** It was uncertain that a recycled paper measuring scoop would provide acceptable functionality, and durability, and yet still be compatible with existing packing equipment. To confirm that the recycled paper measuring scoop was technically feasible, a prototype of the recycled paper measuring scoop was put into test for one month at P&G Home Laundry Laboratory. The effects on scoop quality and the acceptance level of defects are outlined in the following specification (Leonard, 1987):

### 1. Board Specification

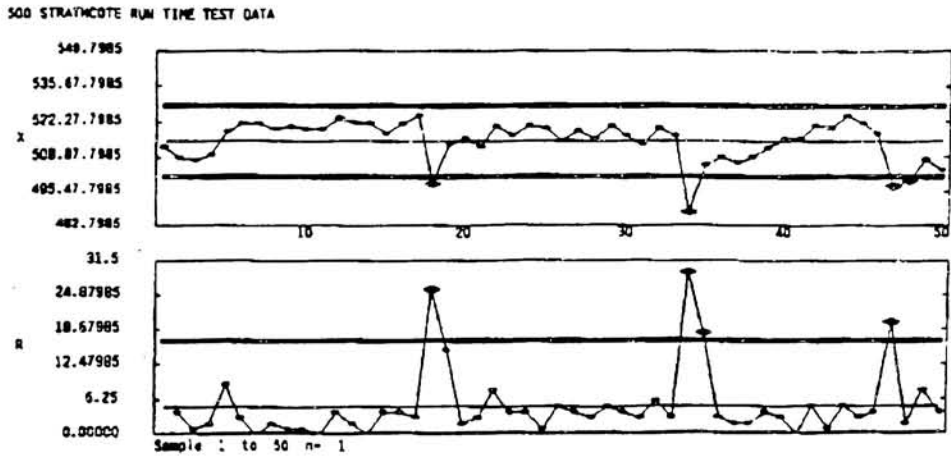
- a. **SCOPE:** This specification states the construction and performance requirements for a 100% recycled paper scoop to hold 94 g of granular laundry detergent and withstand a squeeze force of 2 kgf.
- b. **CONSTRUCTION:** Paper stock shall consist of 50% post industrial (external) recycled fibres, 40% of post consumer recycled fibres and 10% of virgin fibres and internal waste sources. It shall be 400 +/- 25 g/m<sup>2</sup> chipboard MF (machine finish), with the following properties:

Caliper	500 +/- 25 um	TAPPI T 411
Grammage	400 +/- 25 g/m <sup>2</sup>	TAPPI T 410
Taber Stiffness		
Machine direction	375 gf	ASTM D 528
Cross direction	110 gf	TAPPI T 414
Moisture	7 +/-1%	TAPPI T 208
Brightness	79 +/-2	ASTM D 985

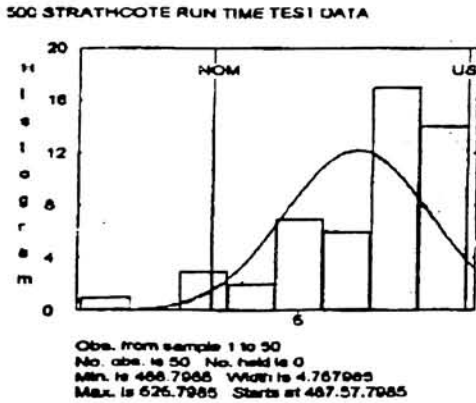
The actual data collected at paper mill with respect to caliper, grammage, and Taber stiffness (MD & CD) is presented graphically by means of Xbar Rcharts, histograms, and capability graphs (Figures 6 & 7).

- c. **PERFORMANCE:**
  - i. Paper Scoop shall operate on Scoop Dispensing machine at 100 per minute.

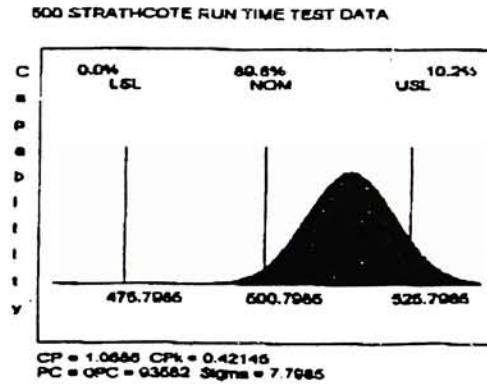
Xbar & Rchart



Histogram



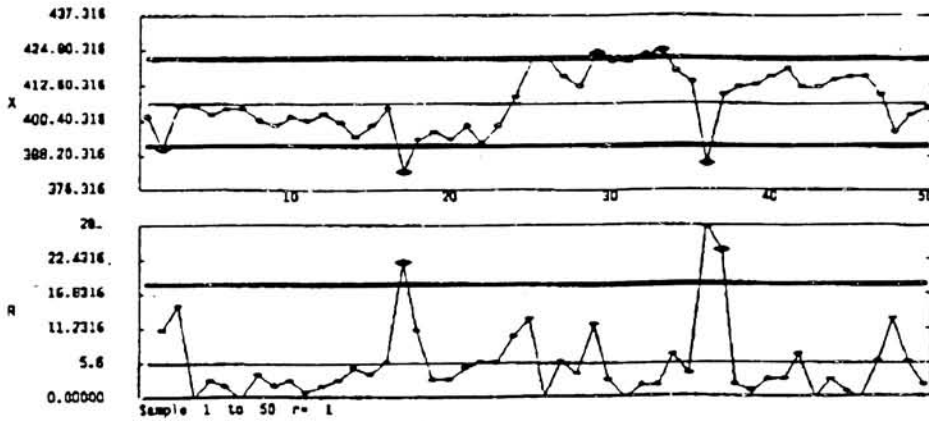
Capability





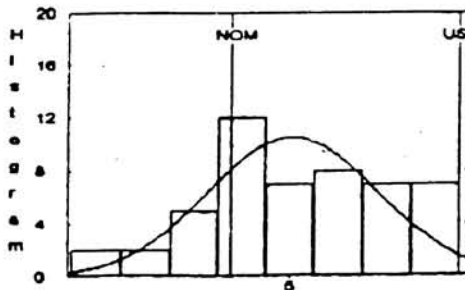
Xbar & Rchart

500 STRATHCOTE MILL RUN TIME DATA



Histogram

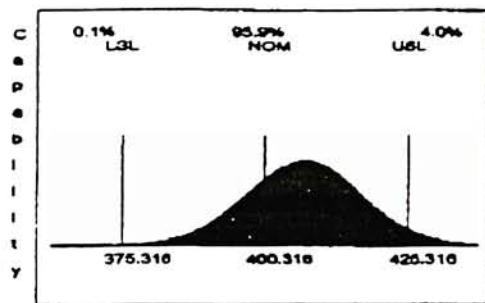
500 STRATHCOTE MILL RUN TIME DATA



Obs. from sample 1 to 50  
 No. obs. is 50 No. used is 0  
 Min. is 343.316 Max. is 425.316  
 Mean is 382.50.316

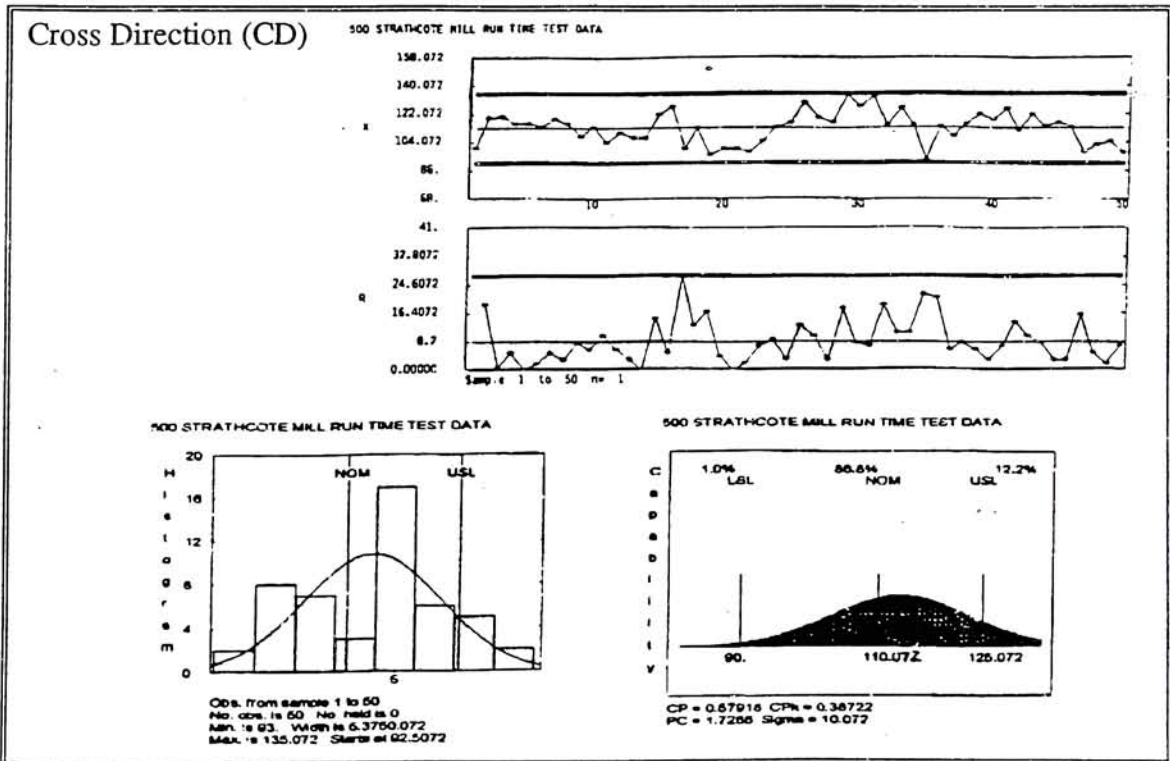
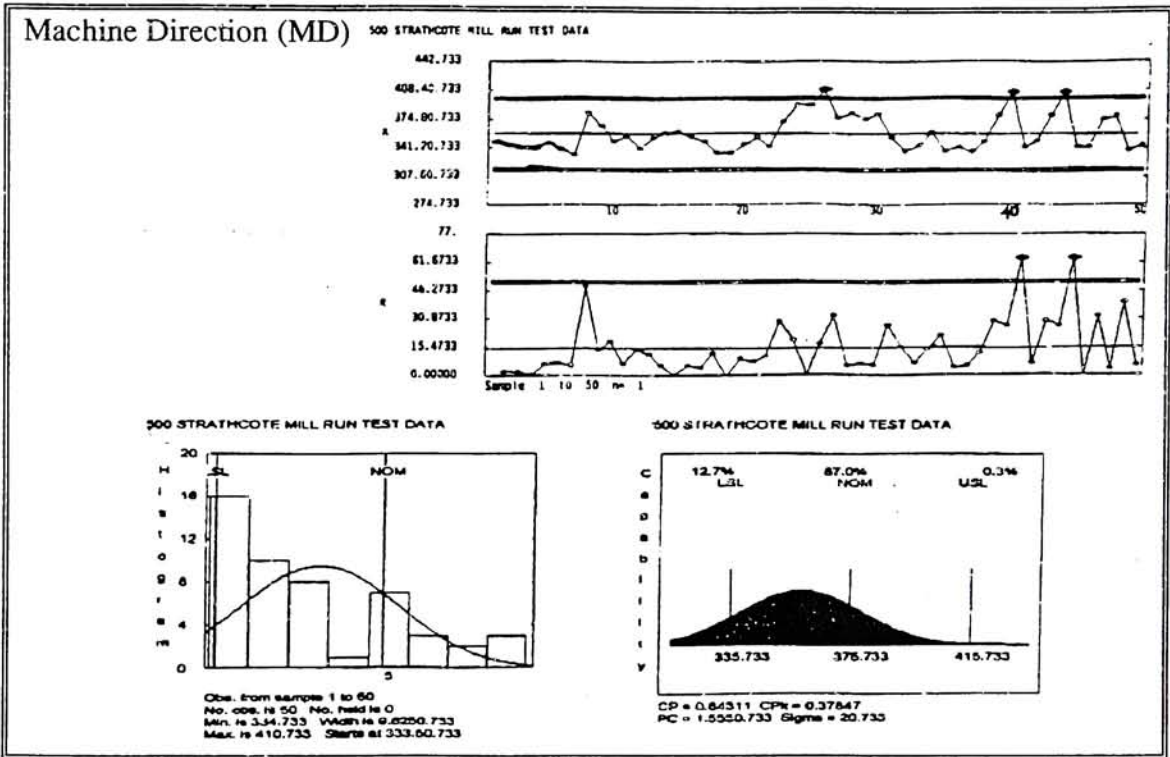
Capability

500 STRATHCOTE MILL RUN TIME DATA



CP = 0.80777 CPk = 0.58005  
 PC = 1.2360.316 Sigma = 10.316

Figure 7: Taber Stiffness



- ii. Paper scoop shall be resistant to the granular detergent weight of 3 kg and shall not be damaged i.e. crushed, collapsed, or cracked during filling.
- d. INSPECTION (ANSI/ASQC Z1.4): The supplier is expected to conduct quality control and inspection sufficient to assure compliance with American National Standard Z1.4. A Single Sampling Plan for normal inspection was used for qualification as the means to determine acceptance or rejection of the recycled scoop prior to conducting the performance test.

AQL 0.1%	Sample size (n) :800
RQL 0.665%	Accept: 2
Producer risk: 0.05	Reject: 3
Consumer risk: 0.1	

- e. CLASSIFICATION OF DEFECTS: Following is a list of critical, major, and minor defects. Any scoop found with critical defects will be rejected. Scoops with major defects will be set aside for inspection. Scoops with minor defects will be used, with a record kept, and notification to the supplier.
1. Critical defects: faults which prevent use of a scoop, or which result in failure to provide technical performance:
    - i. crushed scoop, such that a scoop cannot be dispensed through a dispenser;.
    - ii. torn or cracked edge;
    - iii. folding, fraying.
  2. Major defects: faults which impair product protection, communication to the consumer, or machinability:
    - i. missing colour or illegible printing;
    - ii. damage or puncture in the scoop.
  3. Minor defects: faults which impair appearance, but not function:

- i. inks off colour, or outside of light-and-dark tolerances;
- ii. misregister more than 0.015 inch, which printed more than one colour;
- iii. blotchy or rough printig.

**B. Laboratory Testing of a Recycled Paper Scoop:** To ensure that a recycled paper scoop will meet all design criteria with respect to technical functionality, durability and utility, a rigorous scoop performance test was conducted at P&G's Home Laundry Laboratory (Figures: 8, 9, 10 & 11). It was used to scoop laundry detergent 8 times per day for one month. The recycled paper scoop was also tested with production equipment: a scoop dispensing machine. The test was necessary to assess any incompatibility with production machinery and to evaluate the resistance (compression strength) of the recycled paper scoop to the weight of detergent powder during filling and packing. Note: The scoop is dispensed first and detergent is then filled--bottom filled.

**C. Key Findings:**

1. There was no evidence of the scoop being damaged or crushed when dropped into a detergent box, and the box filled with detergent powder on top of the scoop.
2. The results of a recycled scoop durability test in the home laundry laboratory showed no significant tearing, ripping or any other damage. It lasted more than 33 uses. Note: The largest box of Tide detergent, 10 L size, provides approximately 33 load. Therefore, a measuring scoop must at least last long enough for consumer to finish the box of detergent.
3. Packing line trial results also showed no major issues with the insertion of the paper scoop.



Figure 8: Durability Testing - Paper vs. Plastic Measuring Scoop

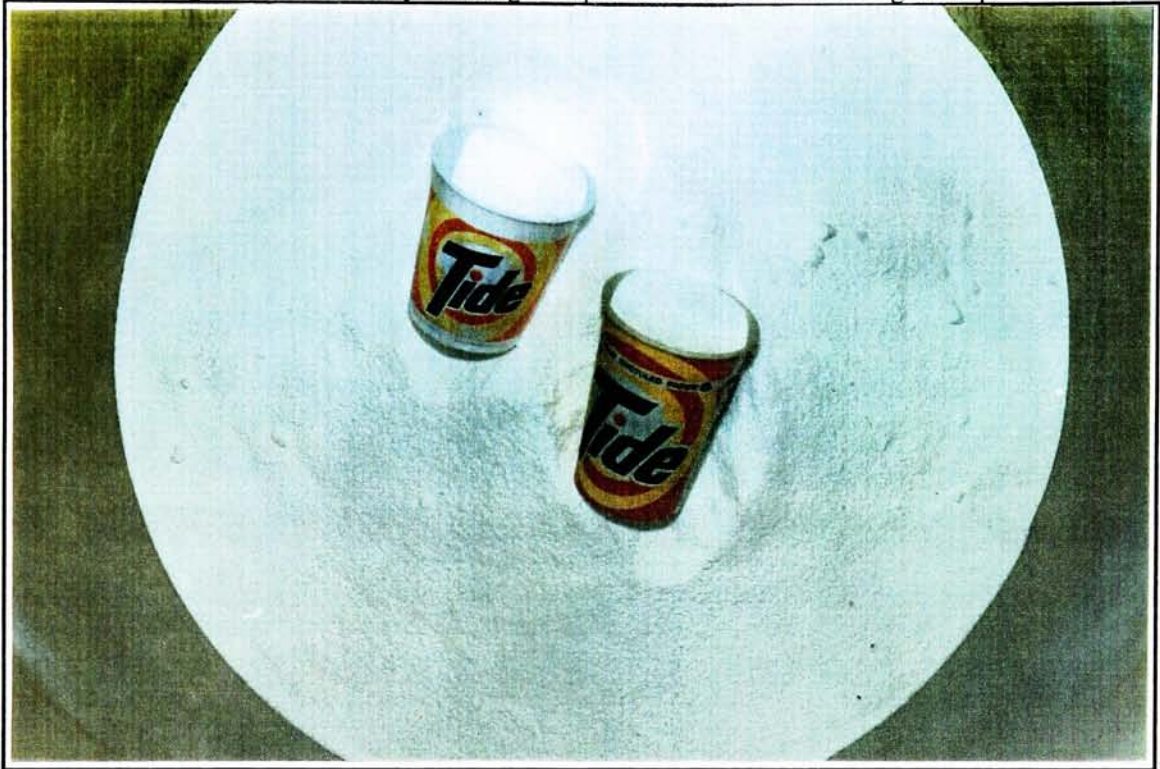


Figure 9: Durability Testing of Recycled Paper Measuring Scoop

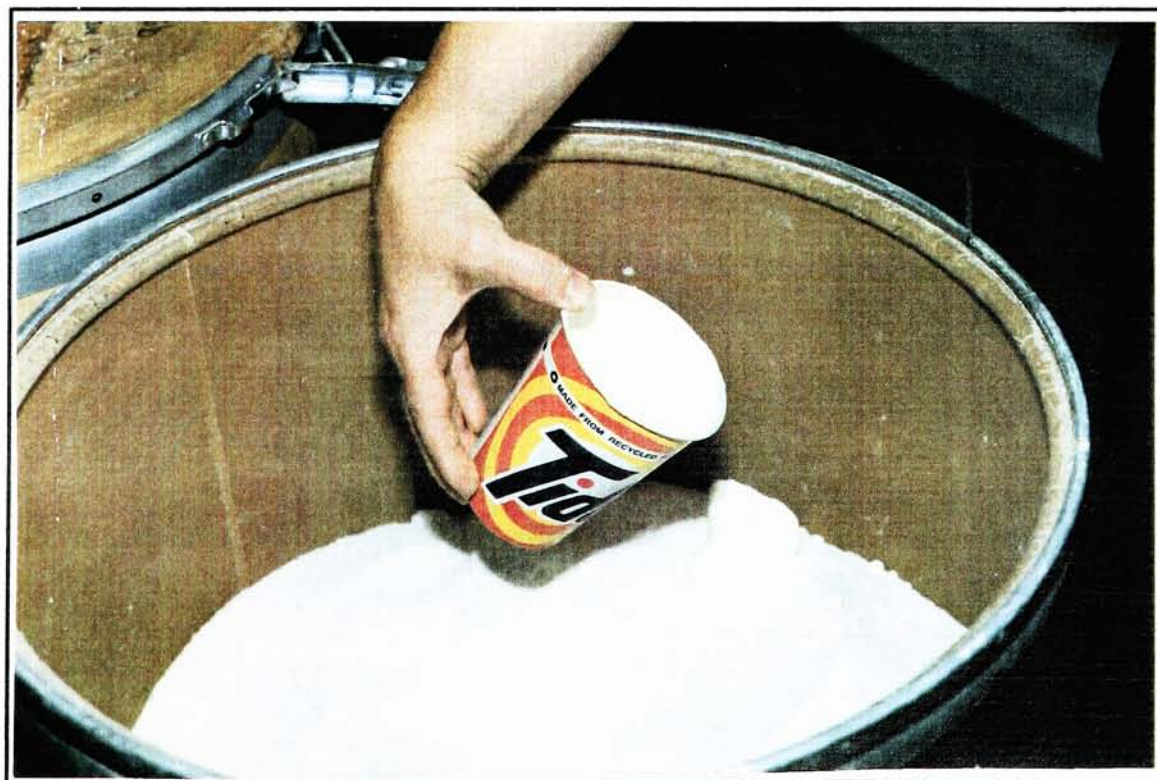
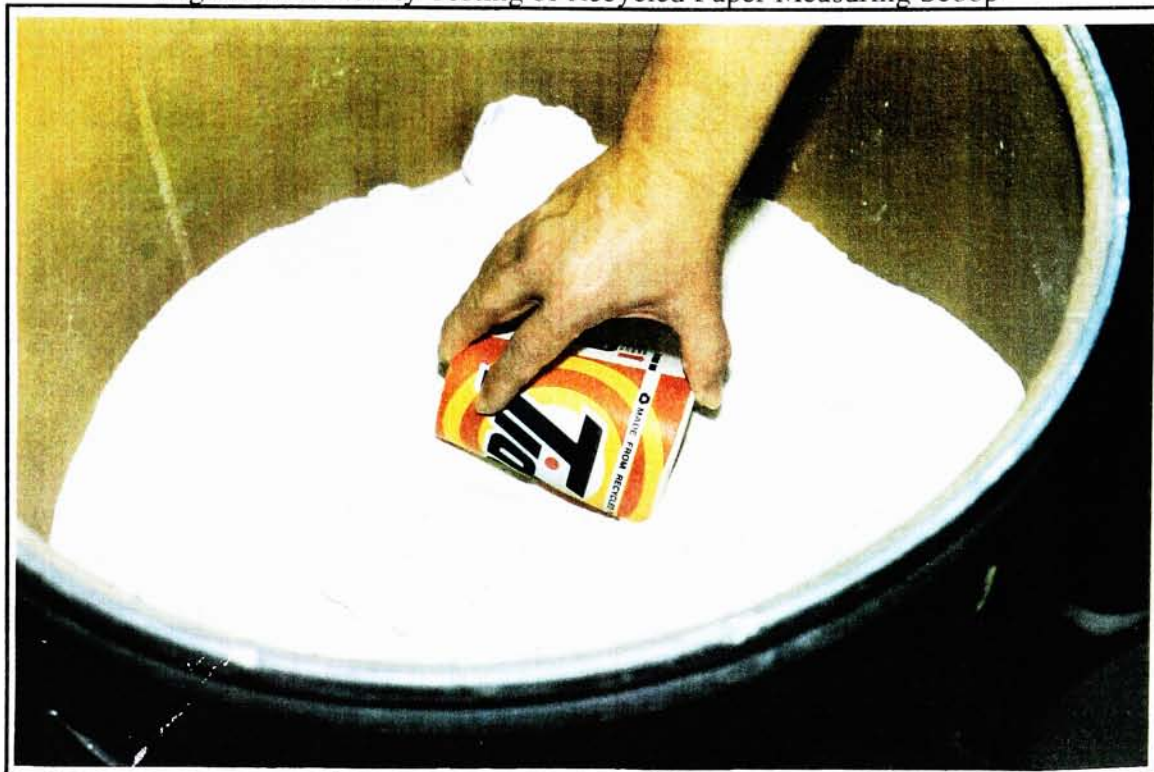




Figure 9: Durability Testing of Recycled Paper Measuring Scoop

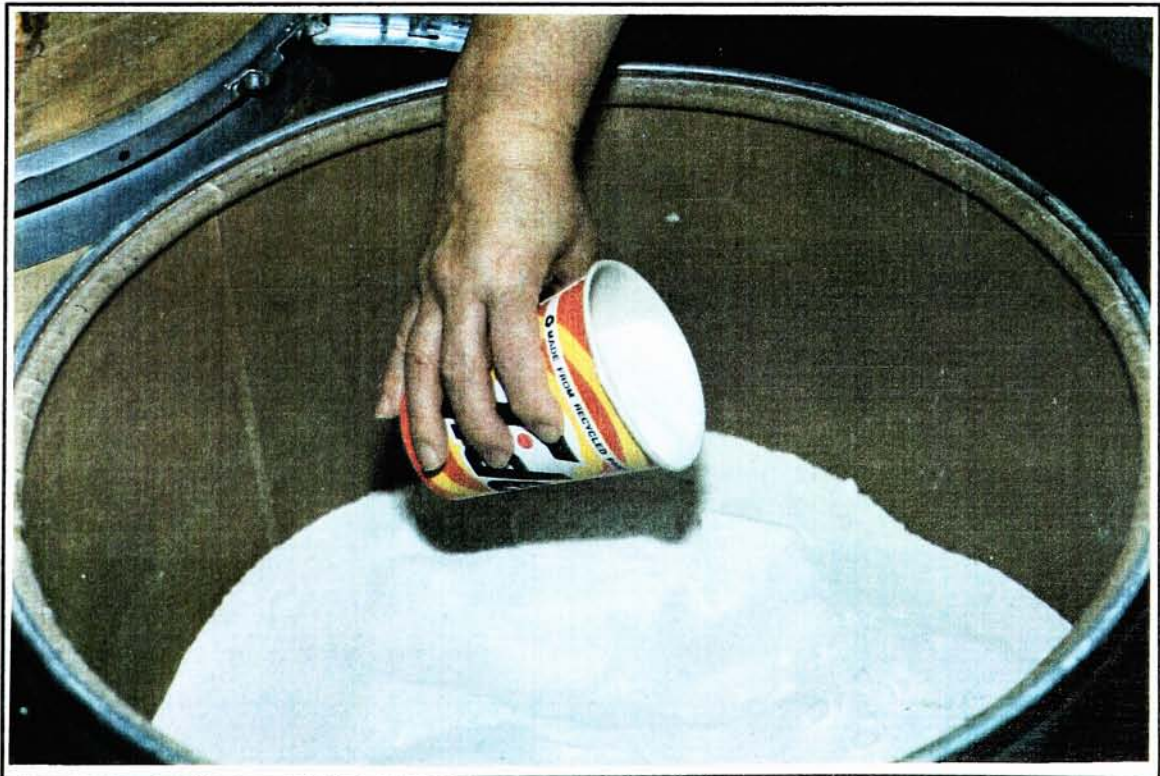
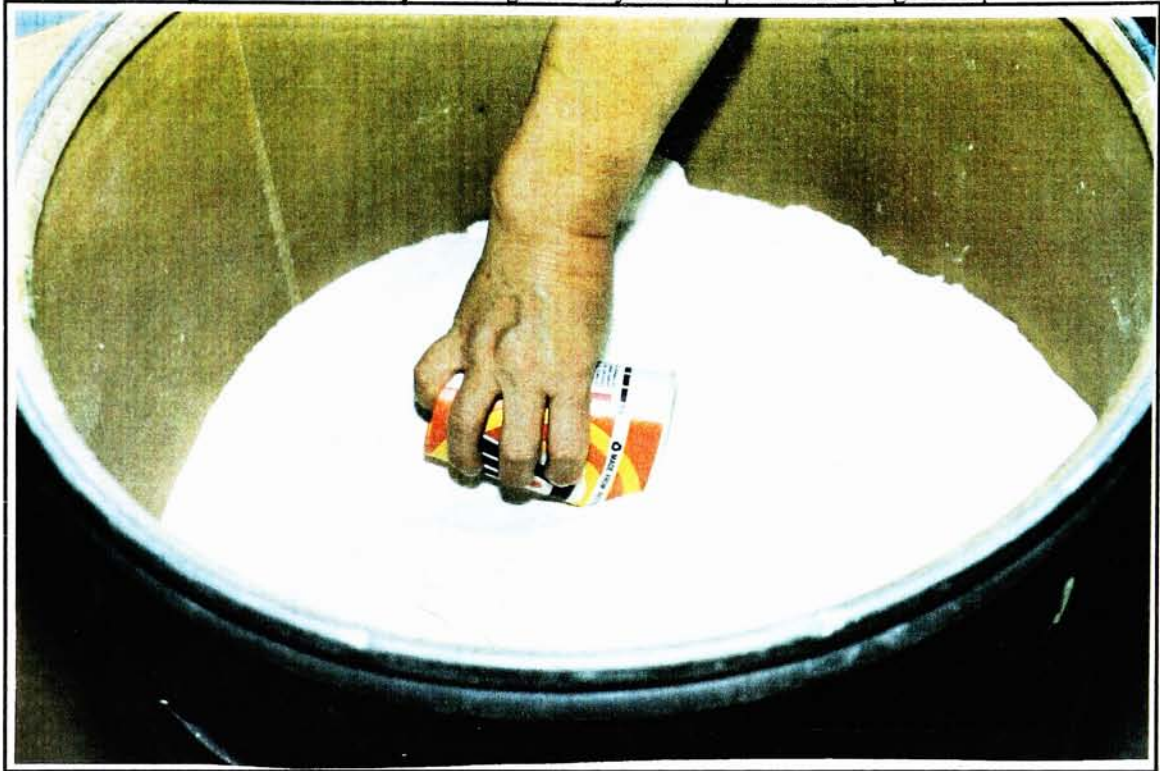


Figure 9: Durability Testing - Virgin Polystyrene Measuring Scoop





### ***3 / PACKAGE RESEARCH METHODS***

#### **I. AN OVERVIEW OF PACKAGE RESEARCH**

Package evaluation, like product evaluation, is very complex in that there are multiple aspects to packages that need to be understood. In addition, the various aspects of the package, product, and environment interact to make it difficult (and at times inappropriate) to evaluate one characteristic of the package in isolation. In package evaluation it is important to think of the package as one of the aspects of the product as a whole.

One of the things that makes package research so interesting is that it covers such a diverse set of attributes. It includes the most obvious aspect of a **package as a container**-- something to hold and store product. This can have implications for the consumer. For example, the package strength, stability, size and shape can affect the customer's storage, shelving display of the product and the consumer's storage of the product. Historically, much of our research efforts have focused on the package as a container.

However, a package is also a **device that is handled and used by consumers**. This raises another set of issues such as: ease of handling, ergonomic "fit": (e.g., designed for smooth interaction of the consumer and the package), clarity of instructions, ease of use, dispensing, etc.

Packages also **communicate information about the product and brand**. For example, the package and its label tell the consumer what the product is and what it is for, what to expect of the product (i.e., quality, performance, benefits), and information about the image of the brand and the manufacturer. Finally, there are purely **aesthetic aspects of the package**. With packages that are displayed in the home (such as tissue boxes, soap pump dispensers, and room fresheners), the package appearance and its fit with the home environment are important for consumer acceptance. In addition for all packages, aesthetics can have dramatic effects on in-store presence and shelf awareness.

Basically, there are two widely and commonly used package research methods: qualitative and quantitative. Both methods can be used for evaluating a wide range of package characteristics including consumer ergonomics, package functionality, product consumption, product/brand image, package aesthetics, shelf impression and product awareness. The methods listed below differ in the package characteristics but are appropriate for testing. They also differ as to where in the package development process they best fit. Some of the methods are most appropriate for early screening, while others are most valuable for evaluating the package after initial optimization.

## II. QUALITATIVE METHODS

Qualitative research involves individual or group interviews conducted in-depth with limited numbers of people. An individual in-depth interview is conducted with one person using mostly open-ended questions. A focus group interview is conducted with eight to ten people using a discussion form questionnaire and led by a trained moderator. Either approach can be helpful in providing early learning about packages. Pictures or prototypes are generally used to obtain reactions. Alternatives may be optimized before proceeding further or even eliminated if results are sufficiently compelling. (Harckham,1989)

## III. QUANTITATIVE METHODS

A quantitative research involves larger number of people using questionnaires with more closed-ended than open-ended questions (Stern, 1991). However, a quantitative research questionnaire is sometime constructed with both open-ended and closed-ended questions. Each means of reaching respondents has advantages and disadvantages such as direct to a point and favourable and unfavourable voluntary comments which should be considered before making a final choice.

- A. **Appearance Testing:** This technique is intended to search for negative attitude and/or determine whether a package has met its desired image objective(s). Appearance testing measures image prior to use, but cannot tell us whether that image will carry over to product perceptions. Matched samples of consumers are shown test packages in a central location, generally on a single product basis. The questionnaire typically consists of an overall rating, direct questions to measure specific aspects of image, and open-ended

attitude questions if there are any concerns about unexpected reactions. Several alternatives can also be compared simultaneously if the number makes monadic exposure impractical. It is recommended that packages be exposed to consumers against a framework of key competitors in order to provide more realistic perspective for evaluations.

**B. Sensational Transfer Testing:** A Sensational Transfer Test measures the effect of the package on consumers' perceptions of a product. Our experience is that major package changes can affect product perceptions, especially in the food, beverage and personal care categories. This testing always involves product usage and is generally done on a single product basis:

1. **Spot testing (e.g., taste testing)** - Matched samples of consumers are exposed to marketplace packages (prototype or actual) and are asked to taste or use product from different packages in a central location. The product is the same, only the packages differ. Overall rating, favourable and unfavourable comments, and direct questions are typically obtained.
2. **In-home use testing** - Matched samples of respondents receive product in marketplace packages (prototype or actual), generally through the mail. The products are the same, only the packages differ.

**C. Functional Package Testing:** Often a question is raised with regard to the functional use of a package by consumers - e.g. can they open, pour, follow directions, etc.? The research used in these cases is usually done on a blind basis, and takes the form of:

1. **Spot testing** - Consumers are asked to use a package(s) in a single product or paired comparison format. They are both observed and questioned regarding problems.
2. **In-home use testing** - Single product or paired comparison tests are used to determine package functionality. Reactions are obtained via a standard product test recall, with questions directed toward the functional aspect(s) of interest.



- D. **Measuring Consumption:** Traditional consumption studies can be used to determine the effect of a package change on consumption of a product. Generally, extended use single product testing is used to measure consumption; often consumers keep a product use diary and the product is measured after the usage period has been completed. Since the test situation itself often has an effect on consumption, comparisons must be relative i.e., the test package compared to the current package.
- E. **Concept Only or Concept and Usage Test:** Concept or concept and usage testing can often be helpful in testing packages which offer new or distinctive benefits. Testing only the concept would be appropriate if the package is primarily expected to impact trial. A concept and usage test would be used if it is believed reactions might differ prior to and after use.
- F. **Cost and Timing:** As a rough guide, research costs for (A) - (E) would be a minimum of \$15M for two package alternatives. In general, it takes approximately three weeks to set up a test, three weeks to conduct central location or five weeks to conduct mail studies (and longer for extended use concept and usage tests), and four weeks to report results. These figures (particularly costs) can vary greatly depending on final base sizes, respondent eligibility, need for users groups, etc.



## ***4 / CONSUMER TESTING OF THE RECYCLED PAPER MEASURING SCOOP***

As previously mentioned, the package research for the recycled paper and plastic measuring scoops will focus on functionality, durability, utility and environmental issues. In evaluating these various characteristics of a package, it may be necessary to have an extended usage period to detect dispensing or other functional problems. Many dispensing problems do not appear until the package is almost empty. In other cases, the functional problem may be such a low frequency event that it either requires a large number of panelists or extended usage to detect it in the sample.

### **I. PACKAGE RESEARCH PLAN**

- A. **Single Product Testing:** Single product tests are conducted in order to obtain reactions from respondents to one product. The objective is to isolate important package performance advantages, such as in qualifying big technological packages, or in assessing potential small differences which could become important with extended usage. The key strength of single product testing is that it simulates the conditions under which the consumer normally evaluates a new purchase; that is with mental reference to his/her previous experience. Consumers also have the opportunity to express spontaneous responses against their own expectations and acceptance criteria, which gives insights into advantages and deficiencies that are truly relevant to the consumer.
  
- B. **Purpose:** The purpose of the test is to determine if a recycled paper measuring scoop is an acceptable replacement for the plastic measuring scoop while conveying to the consumer the intent to enhance the environmental compatibility of the packaging.
  
- C. **Method:** In a single product test, comparable groups each receive a different

package to use. After an appropriate amount of time, respondents are recalled to determine their reactions. Eligible respondents will be females aged 18 to 65. Female respondents are chosen since the majority of them are responsible for doing household laundry and they are more easily recruited (P&G, 1988). The respondents will be given a 10 L Tide powder laundry detergent package containing either the recycled paper or plastic measuring scoops for in-home use testing. They will be asked to use the test product in the usual manner as they would with other laundry detergents.

A 10 L detergent package is used since it provides maximum wash loads: 33. Additionally, the optimum scoop usage (mileage) could be evaluated and assessed. It is important that the recycled paper measuring scoop is robust enough to last until the box of detergent is used up.

Test results will be collected by phone callbacks after four weeks. Based on our historical data, a 10L detergent box would last approximately four weeks. In addition, the four-week usage period would provide respondents sufficient time to evaluate all functional package variables such as ease of use of the scoop, scoop damage during use, etc.

**D. Base size:** As a rule of thumb, a base size of 200-300 respondents would provide meaningful results without being vulnerable to risks. The method of callbacks will also affect the number of returns. For instance, if this is a mail study, the base size would be larger in order to achieve 200-300 returns. Since the results of this test will be collected by phone callbacks, approximately 85% (P&G, 1986) of responses of the total placements is expected. To meet the quotas and to minimize risks and costs, the 270 base size is utilized to yield target response of 230.

It is usually not necessary to conduct all package researches with the telephone callback. Reasons for selecting telephone callback are as follows:

1. It is an efficient way to collect facts and opinions from a broad national sample of people. In particular, it is used for attitude and usage studies which are repeated periodically to monitor consumer awareness, attitudes, and usage in a product.

2. It is an efficient way to conduct callback interviews with people who have previously been contacted in person-participants in package tests. It can be used after a test period to obtain respondents' opinions of the packages they have been testing.
3. It provides flexibility in questionnaire (skip patterns, probes, refer-backs, and terminations), because an interviewer is involved to control the questioning.
4. It is possible to assign enough interviewers to a study to complete hundreds of interviews each day when a central interviewing facility is used. This makes it possible to complete even large, national studies in a short time.

**E. Product Placements:**

The following product placements will be completed in Total:

<u>Product</u>	<u>Target Placement</u>	<u>Interviews/mall</u>
A-10 L Tide with plastic scoop (Control)	270	135
B-10 L Tide with recycled paper scoop	<u>270</u>	<u>135</u>
	Total 540	270

**F. Age Quotas:**

<u>Age group</u>	<u>%/product leg</u>	<u># Interviews</u> <u>/product leg</u>	<u>#interviews</u> <u>/leg/mall</u>
18-34	45%	122	61
35-50	33%	89	44
51-65	22%	<u>59</u>	<u>30</u>
		Total 270	135

**G. Malls:** Two malls will be used for this test:

1. Kozlov mall, 400 Bayfield St., Barrie, Ontario



2. Westmount Place, 50 Westmount Rd., Waterloo, Ontario.

H. **User Quotas:** There are no specific user quotas. However, it is imperative that each product leg is balanced with respect to the following:

1. Past 3 months Tide trial.
2. Past 3 months Tide usage as "most often brand."

I. **The Data and The Treatment of the Data:** Two types of data will be used in this study: primary data and secondary data.

1. The Primary data - The responses to questionnaire administered during the telephone interviews and callbacks are primary types of data. They are crucial for evaluating the consumer acceptance of the recycled paper versus the current plastic measuring scoop. Importantly, data related to attitudes, opinions, awareness, intentions, habits and behaviour of individuals and group are also essential to the study.

2. The Secondary data - Statistical data, previous package research data, internal and external data related to paper and plastic recycling are referred to as secondary data in this study. Additionally, published news, journals, and books are also considered to be secondary data.

J. **Analytical Method of Data:** The Student's T-test will be used to measure any significant differences of the data collected in this study. Other statistics and significant testings will also be considered in the evaluation of data collected.

## II. CONSUMER RESEARCH QUESTIONNAIRE

*Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.*

-William Strunk, Jr.  
The Elements of Style

Does the exact wording of a question really matter that much? Yes, it matters a great deal, probably more than you imagine. Studies have shown that exactly how a question is worded and asked can even reverse the results. Using the right question and the proper wording clearly does make a difference-- often a crucial difference.

In conducting package or product research, a questionnaire must do two basic things: (1) translate the objectives of the research project into specific questions the respondents can answer, and (2) motivate the respondent to cooperate and give his information correctly.

There are three basic sections to most questionnaires:

1. Qualifying questions. These are the questions which need to be asked in order to determine if you are talking with the proper type of person for this study. Example would be:
  - a. What brands of product have you purchased within the past week?
  - b. Do you, or does any member of your immediate family, work for a tested product company, marketing research company, or advertising agency? (This is called a " security screen.")

The answers to these questions determine whether the respondent is qualified for participation in the study. The questions immediately following the qualifying questions are critical. These questions must:

- i. Capture attention and create an interest in what you are researching. You need to get the respondent involved right away.
- ii. Build rapport between the interviewer and the respondent. The more comfortable they feel with each other, the smoother the interview will go and the more complete the information will likely be.



- iii. Make it seem easy for the respondent to answer the questions. This is usually done by including some general, simple, non-threatening questions early in the interview to help the respondent to get "warmed up" and feel it is easy to answer the questions.
2. Basic questions about the category being studied. This category includes all the questions, both open-end and closed-end, which constitute the body of the questionnaire. This is usually the largest section.
  3. Classification or demographic questions. This includes information about the respondent's age, sex, and income, as well as his or her name, address, and telephone number. Classification questions tend to be the least interesting to the respondent and are likely to be the most sensitive, so they are usually placed last.

### III. SCREENER QUESTIONNAIRE

In general the respondents of in-home single product identified testing are first questioned as to whether they used the product for some minimum period. If not, they are asked why it was not used. The interview continues among all respondents who meet usage requirements. The following questions will be used by the marketing research agency in selecting respondents prior to product placement:

Hello, I am \_\_\_\_\_ from XXXX Marketing Research, and today we are speaking with women such as yourself. Do you have a few minutes to answer some brief questions?

1. Do you live within local dialing of this mall?  
 Yes.....**Continue**  
 No.....**Terminate**
2. Do you do all or most of your family's laundry?

Yes.....**Continue**  
 No.....**Terminate**

3. Please tell me in which age group I may place you.

Under 18..... X...**Terminate**

18 - 34..... 1

35 - 50..... 2

51 - 65..... 3

OVER 65..... X...**Terminate**

**[If respondent under 18 or over 65, say: "I'm sorry but we have already talked to the required number of people in that age of group."]**

4. Are you or any member of your household, employed by a company that:

- makes cleaning products?                      Yes.....**Terminate**

No.....**Continue**

- does marketing research?                      Yes.....**Terminate**

No.....**Continue**

5. Have you participated in a home panel for laundry products in the past six months?

Yes.....**Terminate**

No.....**Continue**

6. In what type of dwelling do you live?

Apartment/condominium..... 1

Townhouse..... 2

Duplex..... 3

House..... 4

Mobile home..... 5

7. What size box of laundry detergent do you usually buy?

2 litre..... X...**Terminate**

4 litre..... 2

5 litre.....	3
8 litre.....	4
10 litre.....	5

8. Would you be willing to participate in a home use study? It would involve using a box of detergent that we will provide, for the next four to six weeks. At the end of the third week, someone from our agency will call you to ask a few questions about the detergent we gave you.

**[If No Terminate]**

**[Yes Obtain name, address and the telephone number. Verify all information before placing product with respondent.]**

#### **IV. SINGLE PRODUCT IDENTIFIED TEST QUESTIONNAIRE**

A questionnaire is a method of obtaining specific information about a defined problem so that the data, after analysis and interpretation, result in a better appreciation of the problem. As mentioned before, questionnaire writing is an individual thing, and each person does it a little differently. The questionnaire listed in Appendix B has applied the general guidelines discussed in section II of this chapter. It is tailored and focused on obtaining specific information on the recycled paper measuring scoop versus the current plastic scoop with respect to scoop functionality, durability and the environmental compatibility such as solid waste, and recyclability.

## ***5 / SUMMARY OF THE RESULTS OF THE RECYCLED PAPER SCOOP RESEARCH***

This chapter summarizes key learnings from the single product identified test (Tide Scented 10 L) on the Recycled Paper measuring scoop versus the existing Plastic measuring scoop. (1) *The purpose of this test was to qualify a recycled paper scoop on the basis of appearance, durability, functionality and solid waste management.* (2) *This test was conducted several months ago with the expectation that the findings would be applicable to the measuring scoop for the concentrated product.*

*The test results revealed that the recycled paper measuring scoop was not an acceptable replacement for the plastic measuring scoop.*

**I. BACKGROUND:** The existing measuring scoop used in P&G powder laundry detergent products is made from virgin polystyrene. Scoops were inserted in the 4 L/5 L and 8 L/10 L laundry detergents since Fall 1988 to encourage consumers to use the recommended dosage. In response to consumer complaints regarding the environmental impact of plastic packaging waste, a recycled paper measuring scoop was developed. A home performance test was then conducted to confirm the acceptance of the recycled paper measuring scoop over the plastic measuring scoop.

### **II. KEY FINDINGS**

Despite that overall product and package ratings were generally flat for both plastic scoops and recycled paper scoops (77 vs. 79), most panelists were dissatisfied with scoop functionality, rigidity and durability. The scoop rating results showed significant difference between plastic and paper (40 vs. 31). Many panelists claimed they encountered paper cup damaged more often than plastic (35 vs. 9). The ratings of the manner in which the paper scoop became damaged were as follows: start to fall apart/went limp-28; collapsed when wet-35; and cracked or split -22. The collapsed scoop was mainly caused by high humidity environment in particular the basement area and wet hands.



Undoubtedly panelists have many false perceptions of plastic scoops. Although not based in fact, they believe: a) plastic scoop is not recyclable and hazardous to incinerate; b) plastics take up the most space in landfills; and c) replacing plastic scoops with paper scoops is much better for the environment. When probed about the environmental aspects of the plastic scoop vs. recycled paper scoop, a majority of the panelists clearly favoured recycled paper over plastic. Without exception, paper was viewed as more positive and less negative than plastic as reasons for consumers environmental rating. Approximately 57% of the panelists gave the recycled paper scoop extremely good/very good environment rating while only 13% of the panelists gave the plastic scoop the same environment rating. Additionally, the same group of panelists claimed that plastic was unlikely to be recyclable and not biodegradable (29%).

In general, panelists like to receive scoops. The scoops were perceived by most panelists as something useful and convenient. A high fraction of panelists cited they used free scoops they received versus other utensils. The main reasons that panelists liked the scoops seemed to be that they could easily measure the right amount of detergent, the scoops are always available and easy to use, and the scoops can be used for many other things (children to play with the sandbox, to plant flowers, to measure bleach , etc.). Negatives for the scoops were that they are buried in the detergent box and are messy ( detergent dust around the outside of the scoop). When asked about scoop flighting (only in some boxes), they gave mixed reaction. Some felt it would be good for the environment, while others liked the convenience of a scoop in every box. Most panelists felt that a more durable scoop with a handle would be a big improvement, although they would not want to pay more for such a scoop.

Other findings include:

- Approximately 29% of paper scoop panelists considered their suggestions for improvements on the paper scoop were important. These improvements included: a) make the paper scoop more durable (26%); b) add a handle (16%); and c) go back to plastic (19%). While similar questions were asked to the plastic scoop panelists, only 22% stressed for the importance of improvements.
- There were no significant difference in likes and dislikes of the scoop in particular with respect to material used in scoop.



- The research data showed that 82% of plastic scoop panelists indicated plastic scoop would last long enough for use in several boxes while only 61% of the paper scoop panelists claimed for the same number. This is very important information for supporting the reduction of scoop in-pack program in future.

### III. DISCUSSIONS:

- A. *Negative ratings on the recycled paper measuring scoop relate specifically to its functionality, durability, and utility.* They were rated lower than its plastic counterpart (Figure 12).
- B. *Damage to the recycled paper measuring scoop is attributed directly to a wet or humid laundry environment;* 35% collapsed when wet, 28% started to go limp, 22 % ripped down the side/cracked down center and 15% related to folding and fraying (Figure 13). As mentioned in Chapter 2, section II, subsection B, the recycled paper scoop was put into a rigorous performance test at P&G 's Home Laundry Laboratory prior to conducting Home performance Test (HPT). There was no evidence of the scoop being damaged, crushed or collapsed when wet. However, the HPT results showed significant high percentage of scoop damage. This is because the damage would likely not be as noticeable under controlled laboratory condition. The panelsits' environment more likely represents the **real-world** condition. Additionally, during the laboratory test, wet hands were not considered as the key attribute to the damage. While in reality, the wet hands are primarily factor that accelerated the deterioration of the recycled paper scoop.
- C. *Positive ratings on the recycled paper measuring scoop relate to generalities, and environmental preference over the plastic.* The recycled paper scoop was ranked high from an environmentally compatible standpoint such as: paper scoop is recyclable; biodegradable; break down faster in landfills; and can be burned in fireplace etc. Figure 14. illustrated the environmental rating of plastic scoop versus the recycled paper scoop.
- D. *The plastic measuring scoop received higher ratings for durability over the recycled paper scoop (Figure 15).* 16% of the plastic scoop panelists claimed the

FIGURE 12: RATING OF SCOOP

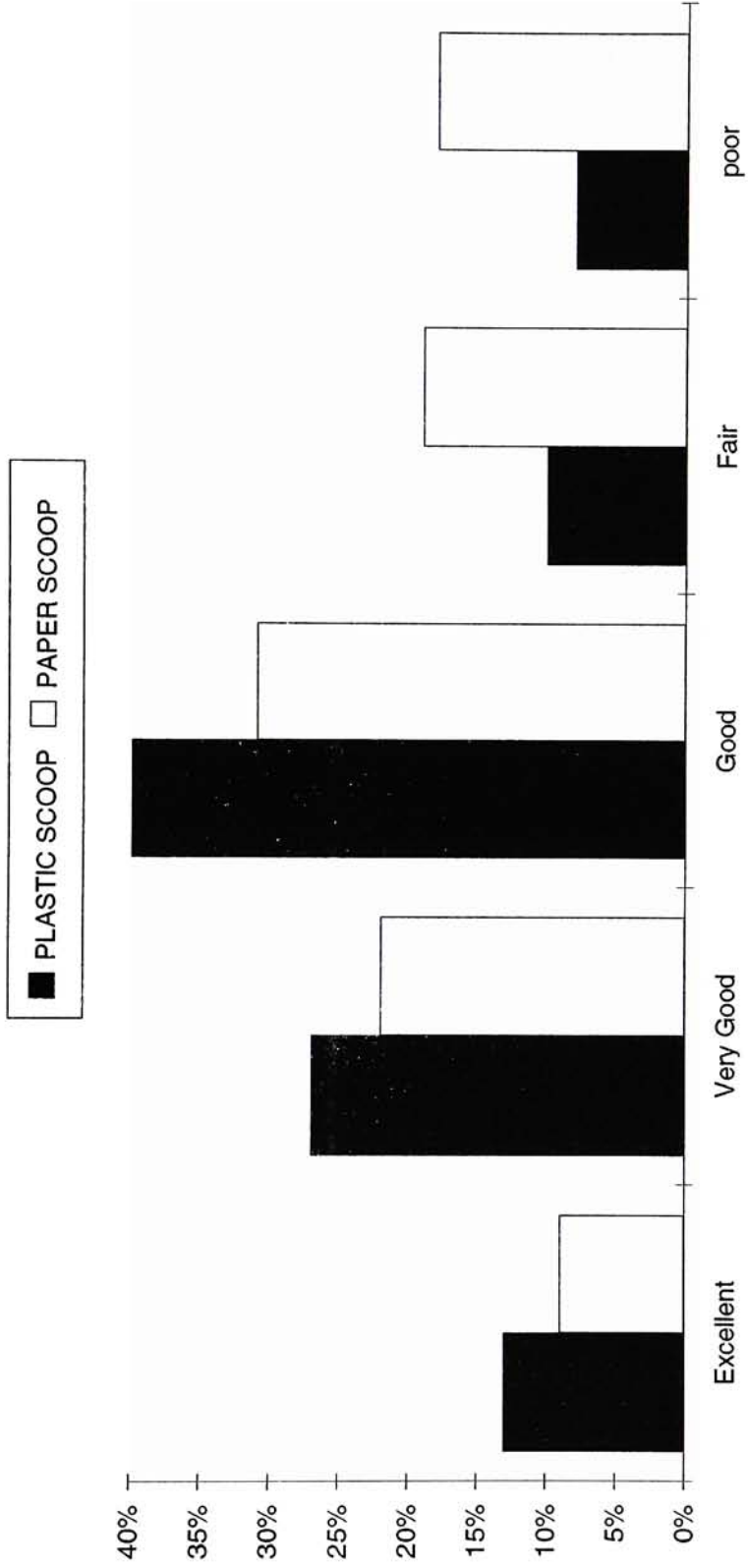


FIGURE 13: MANNER IN WHICH PAPER SCOOP BECAME DAMAGED

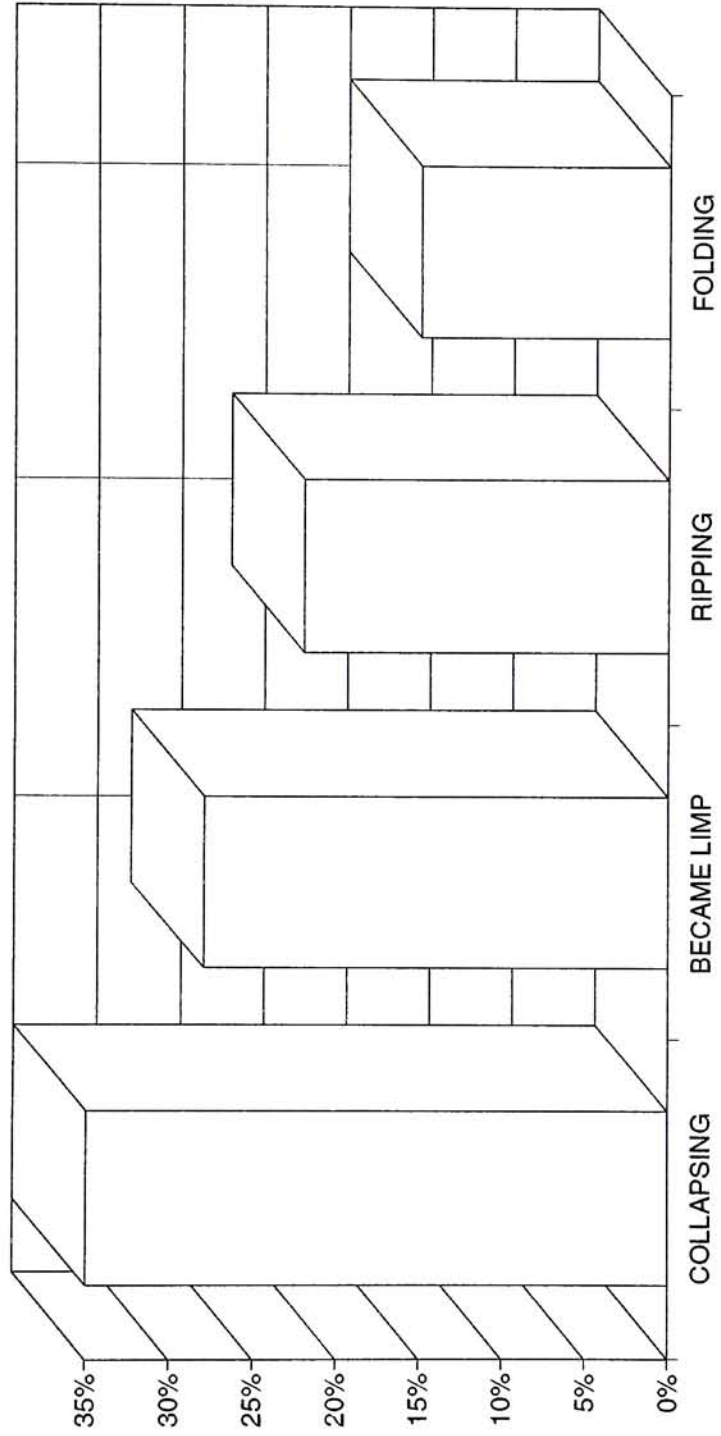


FIGURE 14: RATING OF SCOOP FOR BEING GOOD FOR ENVIRONMENT

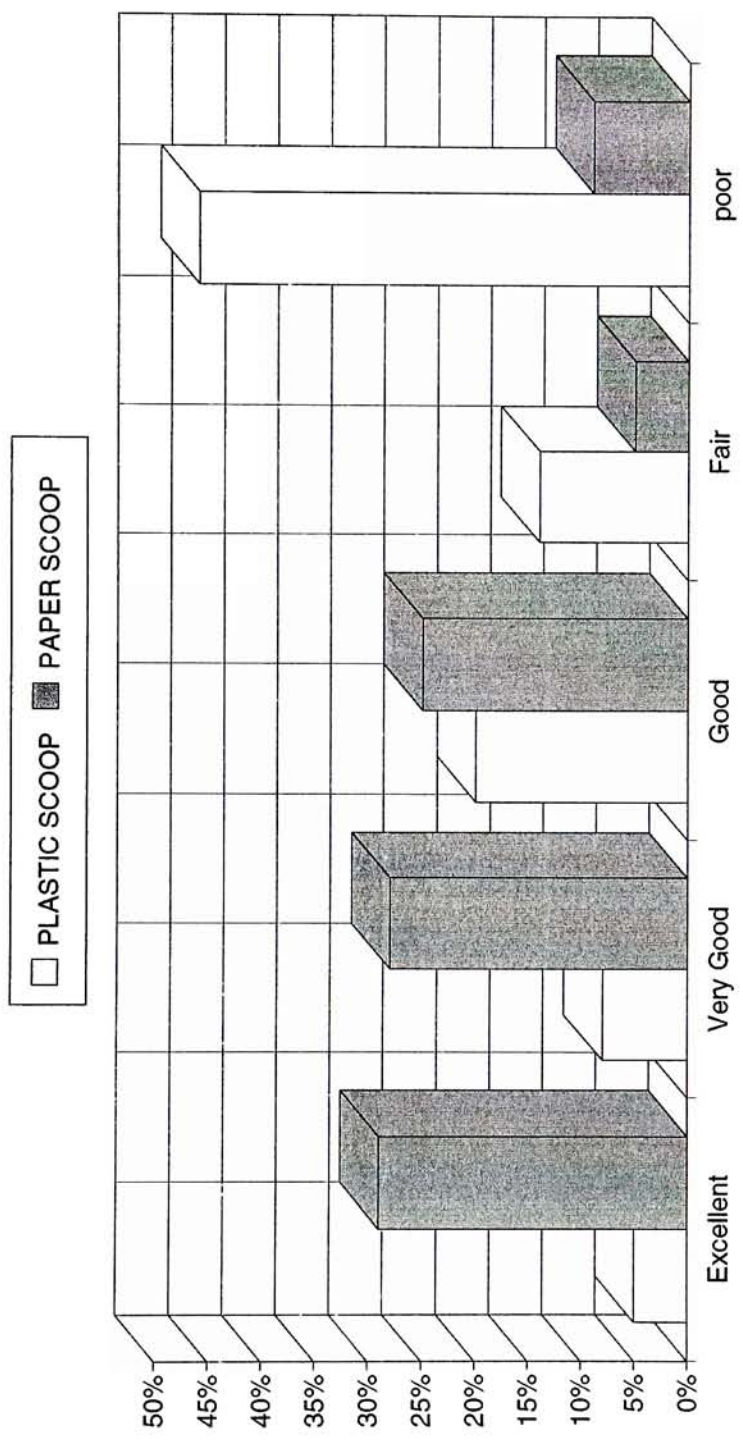
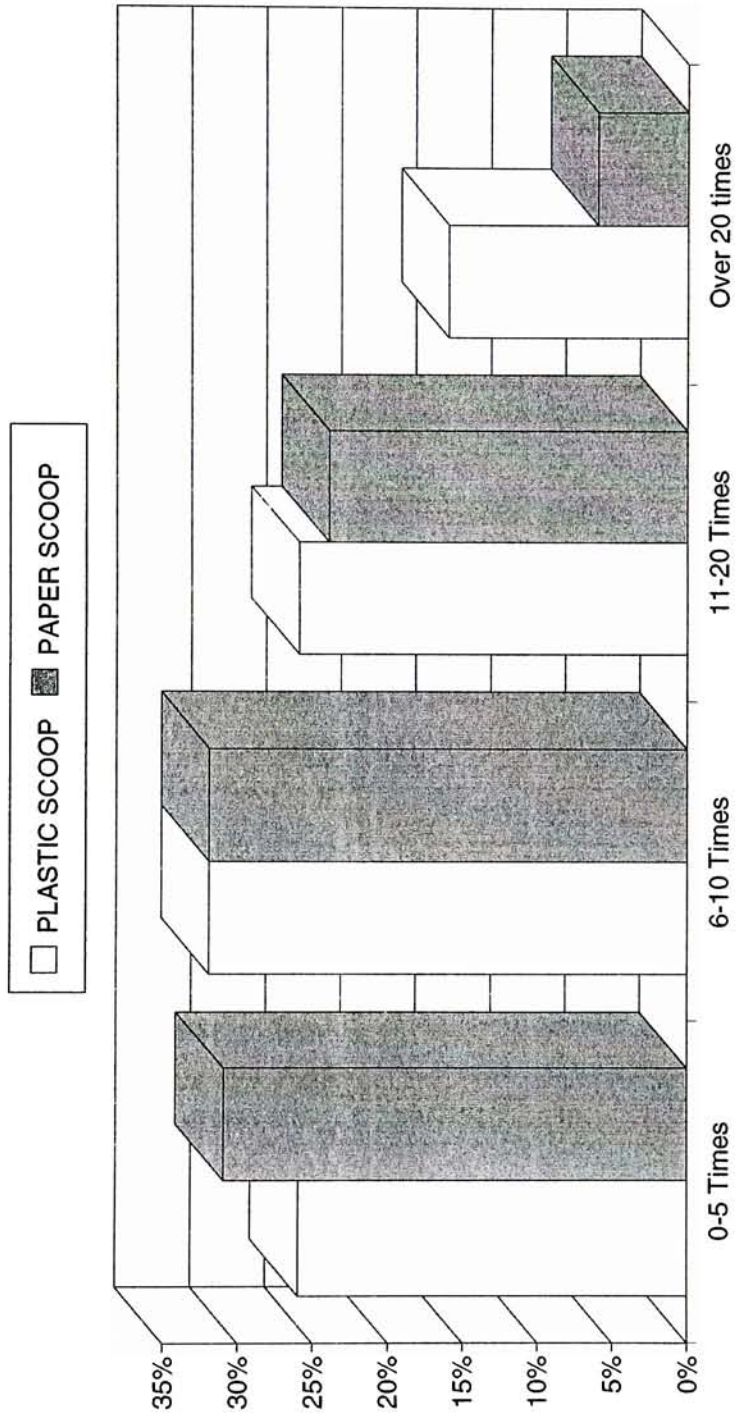


FIGURE 15: HOW LONG SCOOP LASTED BEFORE BECOMING DAMAGED?





plastic scoop lasted more than 20 times before they became damaged while only 6% of the paper scoop panelists claimed the paper scoop lasted for this same number.

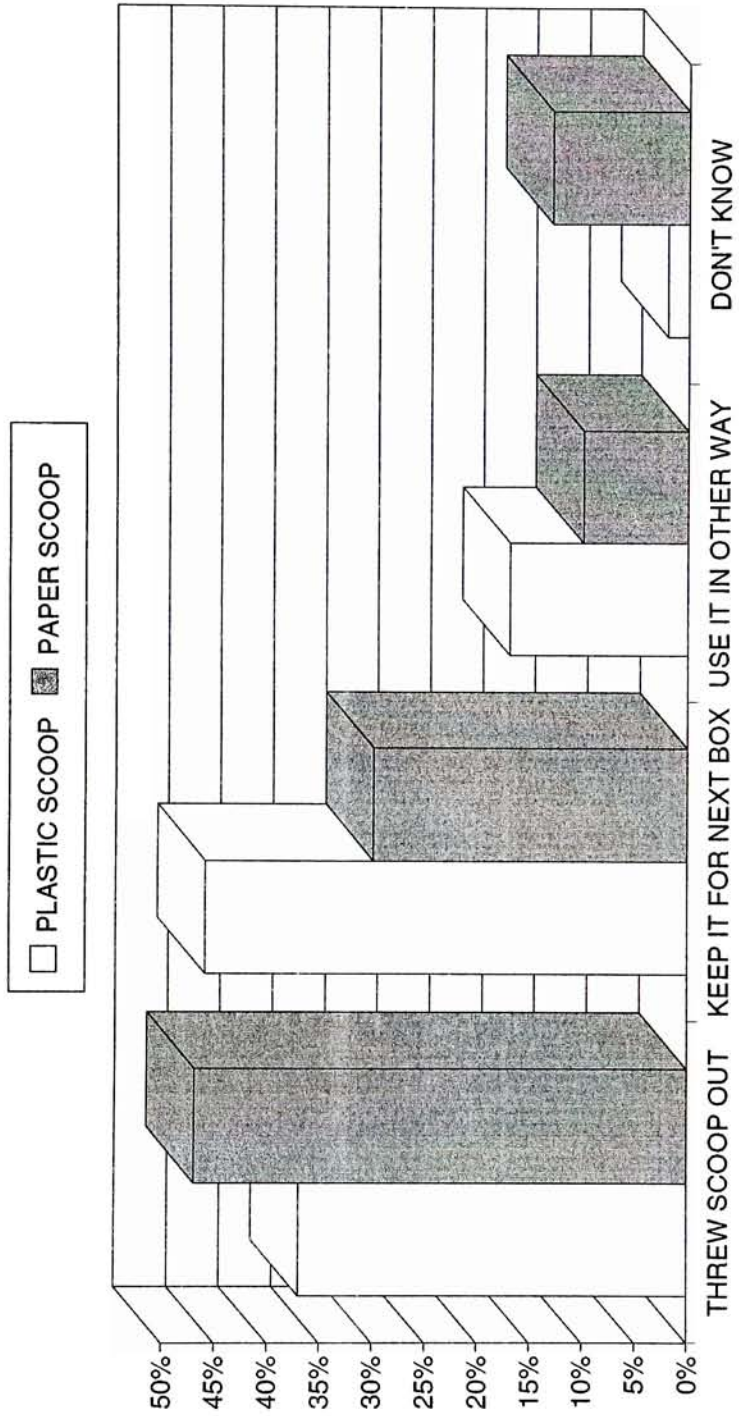
E. *The plastic scoop would likely be kept and used for the next box of detergent instead of being thrown out after the original box of detergent was finished.*

Figure 16. showed that 47% of the plastic scoop panelists would keep the scoop for use with next box of detergent while only 30% of the paper scoop panelists would keep the paper scoop for use with next box of detergent.

#### IV. CONCLUSIONS:

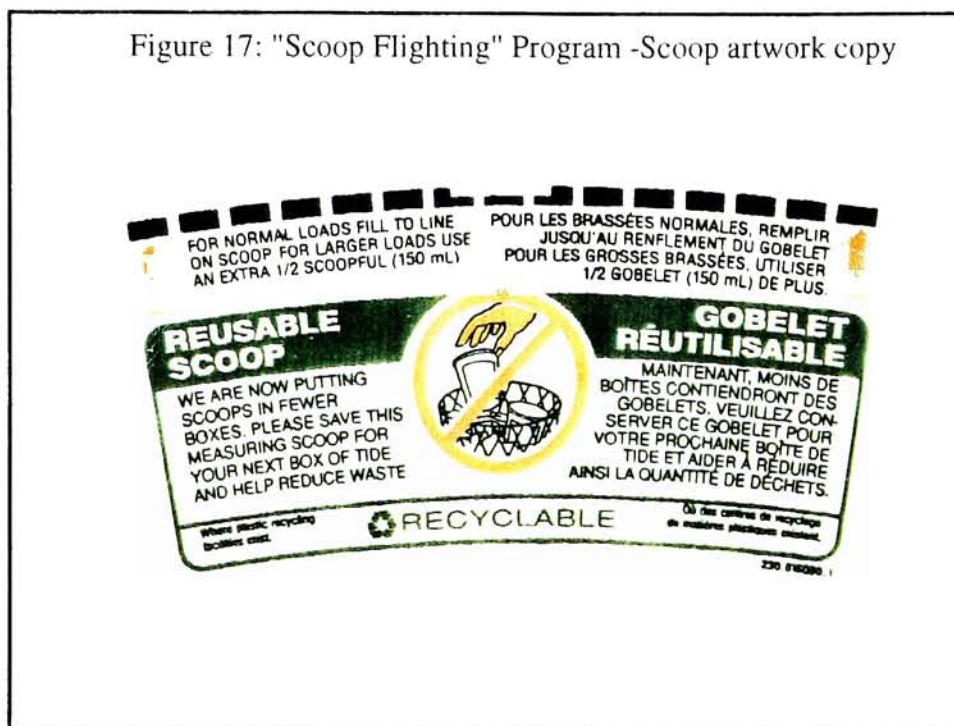
- A. A high percentage of panelists (57% vs. 13%) favoured the recycled paper measuring scoop over its plastic counterpart. This is because most panelists do not understand the term biodegradability, recyclability, or the distinction between **recycled** and **recyclable**. Also, a survey on environment, conducted in 1991 by the Angus Reid organization, indicated that 80% of people interviewed were unaware of polystyrene recyclability compared to only 8% who were aware. For the reason noted above, the recycled paper scoop is not a reasonable direction to proceed. Conversely, the continuous education of consumers on the recyclability of polystyrene and the recently opened polystyrene recycling facility in Mississauga, Ontario, will offset/justify any dissatisfaction over the environmental impact of the plastic measuring scoop waste.
- B. Several consumer use tests on detergent plastic measuring scoops including this one, have identified that plastic scoop failures such as cracking and collapsing are very rare over extended periods of time. I believe that by implementing a "Scoop Flighting" program (Figure 17), a reduction in scoop in-packing frequency, will definitely help to minimize consumer concerns on environmental issues regarding plastic measuring scoop accumulation and disposal. The program identifies scoops as being recyclable and re-usable for the next box of detergent and asks consumers to save their scoops since future boxes will contain fewer scoops. Based on current volume estimates, it will result in a 52% reduction in the number of scoops going to landfill. Importantly, it will also result in substantial cost savings of approximately \$750M US annually.

FIGURE 16: WHAT WAS DONE TO SCOOP AFTER DETERGENT FINISHED?



□ PLASTIC SCOOP    ■ PAPER SCOOP

Figure 17: "Scoop Flighting" Program -Scoop artwork copy



- C. Negative ratings on paper related specifically to the recycled paper scoop that was tested. Functionality, durability, utility were lower than for its plastic counterpart. Positive ratings on paper related to generalities and environment preference over plastic but are strong in spite of the functional negatives. The consumers' message was loud and clear "**We want paper, but we want it to work well.**" P&G needs to respond to the consumers' message. By integrating better paper scoop design and improving the structural strength, the recycled paper scoop will then be an acceptable replacement over the plastic scoop. If P&G wishes to utilize the scoop as a marketing weapon against their competitors, then they need to respond to the consumers clearly stated--preference i.e. paper over plastic. They truly need to resume the research and development on the recycled paper scoop.



## V. RECOMMENDATIONS:

At the outset, I explained that the purpose of this paper is to address consumers' need with respect to: environmental concerns; need for quality; and most importantly, the package functionality, durability and utility. However, the research results are interpreted, what's obvious is the consumer's unabated concern for the environment and the package integrity, functionality, and the role packagers can play in helping to protect it.

As packaging engineers, we all have a vested interest in creating a climate in which intelligent packaging can be promoted successfully, often as a source of competitive advantage, but sometimes as a generic sectorial weapon to reduce the capability of those forces that would injure our consumers and devalue our products or brands.

Despite all we have heard about the consumer concerns and complaints, this is an issue that continues to demand attention from consumer, government and packagers. The research results conclusively show that the push to use the recycled material in packages likely fails to be practical. This brings us back to the challenge. How can we minimize packaging's role in solid waste?

There are important factors this paper has not covered. It has addressed neither the qualification of recycler, nor collector of paper or fibres. Also, this paper does not explore implications of expansion to include the Life Cycle Analysis (LCA) of paper and plastics. While a detailed discussion is beyond the scope of this paper, further studies are required to justify the use of the new design.



## Appendix A

Table A-1: Consumer Comments for Scoop In-Packing in Tide

<u>Month</u>	<u>Scoop Comments</u>	<u>Total Comments</u>	<u>% of Total</u>
Jan. 91	0	59	0
Feb.	0	35	0
Mar.	9	45	20
Apr.	5	36	14
May	9	41	22
Jun.	13	44	30
Jul.	12	35	34
Aug.	10	46	22
Sept.	9	39	23
Oct.	20	56	36
Nov.	16	54	30
Dec. 91	<u>25</u>	<u>45</u>	<u>56</u>
Total	128	535	24%

### Example Verbatims

"... enclosing these plastic cups is totally unnecessary. Yes, you're trying to make things more convenient for us - but we're all going to have to cut down on convenience a bit if our planet is to survive. Please help!"

"... biggest sin of all is what happens when we throw them out. They don't disintegrate into lovely new earth, they just sit there."

"With all of the environmental problems and excess garbage, I was wondering if you could stop putting plastic cups in your Tide soap."

## Appendix A

Table A-2: National Household Garbage Disposal Study - Data Summary

<u>% of All Households</u> Base 308	Canada <u>National</u>	French <u>Canada</u>	Metro <u>Toronto</u>	U.S. <u>Nat'l</u>
1. Levels of concern about six Environmental Issues				
Industrial Waste	93	94	91	92
Air Pollution	93	94	91	87
Fishing/Rec. water	92	80	87	90
Drinking Water	86	93	84	90
Household Garbage	77	76	80	77
Household sewage	72	78	69	73
2. Packing materials				
Safe for Environment				
Paper	76	58	76	85
Cardboard	66	58	67	82
Glass	40	30	43	47
Tin	28	17	35	37
Aluminum	23	20	31	43
Plastic*	12	14	14	16
* Reasons Plastics Not Safe				
Not Biodegradable	61	57	65	68
Recyclable.				
Paper	94	94	95	81
Cardboard	81	86	84	75
Glass	88	90	85	75
Tin	74	63	81	53
Aluminum	75	73	78	84
Plastic	48	54	48	32

## Appendix B

### Recycled Paper Scoop In-Home Use Test Questionnaire

Thank you for helping us. Since I am most interested in **your opinion** of the Tide detergent we gave you, please answer my questions as specifically as you can.

1. "Before you tell me some of the things you noticed about the Tide laundry detergents we gave you, I am interested in your overall opinion of this Tide. First I would like you to rate it on a scale of 'Poor', 'Fair', 'Good', 'Very Good', and 'Excellent'. Considering everything about this Tide, how would you rate it **overall** as a product for household laundry?" (Circle one only)

Poor..... ( )

Fair..... ( )

Good..... ( )

Very Good..... ( )

Excellent..... ( )

2. "Thinking only about this Tide laundry detergent, what are all things you **DISLIKE** about this Tide?" (Please be as specific as possible)

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3. "Thinking only about this Tide laundry detergent, what are all things you **LIKE** about this Tide?" (Please be as specific as possible)

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4. "Now I would like you to rate this Tide from several standpoints on the same scale of 'Poor', 'Fair', 'Good', 'Very Good', and 'Excellent'." (Circle one only)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>
a. Cleaning clothes	( )	( )	( )	( )	( )
b. Whitening clothes	( )	( )	( )	( )	( )
c. The package it came in	( )	( )	( )	( )	( )

5.a. "Thinking only about **Tide packaging** (not the product inside), what are all the things you **DISLIKE** about Tide packaging?" (Please be as specific as possible)

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5.b. "Again, thinking just of **Tide packaging** (not the product inside), what are all the things you **LIKE** about Tide packaging?" (Please be as specific as possible)

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6. "If you would like improvements on the Tide package, what are all the improvements you would make?" (Please be as specific as possible)

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7. "How important are these improvements to you?" (Circle one only)

- Extremely Important..... 1  
 Very Important..... 2  
 Quite Important..... 3  
 Slightly Important..... 4  
 Not very Important..... 5

8. "Was there a scoop inside this Tide laundry detergent you used, or not?"

Yes.....continue with Q.9

No.....skip to Q.10

9. "**Where** inside the box of Tide did you find the **scoop**? Was it...?" (Read list)

- On top of the detergent..... 1  
 Partially buried in the detergent..... 2  
 Completely buried in the detergent..... 3  
 Don't remember..... 4



10.a. "Did you **use the scoop** that was inside the box to measure Tide, or not?"

Yes.....skip to Q. 11

No.....continue with Q.10b

10.b. "Why?"

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11.a. "When you used **the scoop** that was inside this box, how much Tide did you usually measure per load of laundry? Did you....? (Read list and circle one only)

- Fill the scoop to the very top..... 1  
 Fill the scoop to the line..... 2  
 Fill the scoop a little lower than the line..... 3  
 Fill the scoop a lot lower than the line..... 4  
 No usual/depends on size of load..... 5  
 Don't know..... 6

11.b. "Thinking only about the scoop, how would you rate the scoop?" (Circle one only)

- Poor..... ( )  
 Fair..... ( )  
 Good..... ( )  
 Very Good..... ( )  
 Excellent..... ( )

11.c. "Did the scoop become damaged during use?"

Yes.....continue with Q.11d

No.....skip to Q.12a

11.d. Describe the damage of the scoop during the use. (Please be as specific as possible)

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11.e. How long did the scoop last before it became damaged? After you used it

- 0-5 times..... ( )  
 6-10 times..... ( )  
 11-20 times..... ( )  
 over 20 times..... ( )  
 Don't know..... ( )

12.a. "Did you finish this box of Tide, or not?"

Yes..... continue with Q.12b

No.....skip to Q.13

12.b. "When you finished this box of Tide, what did you do with the scoop? Did you.....?"

(Read list and circle one only)

- Throw the scoop out..... ( )  
 Keep the scoop to use with another box of detergent..... ( )  
 Keep the scoop to use some other way..... ( )  
 Don't know..... ( )

13.a. "Do you like receiving a scoop in every Tide box, or not?"

Yes.....skip to Q.14

No.....continue with Q.13b

13.b. Please explain "why not?"

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14.a. "How would you feel about getting a scoop once in a while, say one out of every 3 boxes, and were told to save the scoop for the next box which may not contain one?"

(Circle one only)

- Would like this extremely..... 1  
 Would like this slightly..... 2  
 Would not care one way or the other..... 3

Would dislike slightly..... 4  
 Would dislike extremely..... 5

14.b."Why?"

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14. "Do you think the scoop last long enough to use in several boxes?"

Yes.....Y

No.....N

15.a."Thinking only about the Tide scoop, what improvements would you suggest?" (Be as specific as possible)

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15.b."How important are these improvements to you?' (Circle one only)

Extremely Important ..... 1

Very Important..... 2

Quite Important..... 3

Slightly Important..... 4

Not Very Important..... 5

16.a."Thinking only about the scoop, what would you rate this scoop for being good for the environment?" (Circle one only)

Poor..... ( )

Fair..... ( )

Good..... ( )

Very Good..... ( )

Excellent..... ( )

16.b. "Why did you rate the scoop this way?"

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### CLASSIFICATION

These last few questions are asked just to divide our interview into groups:

17. "How many loads or machine washes do you do in an average week?" (Circle one only)

- 0-5 loads..... 1
- 6-10 loads..... 2
- 11-15 loads..... 3
- 16-26 loads..... 4
- Over 26 loads..... 5

18. "In total, including yourself and any babies, how many people are living in your household at this time?" (Circle one only)

- 1..... 1
- 2..... 2
- 3-4..... 3
- 5 and over..... 4

19. "At the present time, are you, yourself, employed or not?" (Circle one only)

- Yes: Full time..... 2
- Part time..... 3
- Not employed..... 4

20. "Which of the following groups best describes the total yearly household income before taxes?" (Circle one only)

- Under \$20,000..... 1
- \$20,000-\$29,000..... 2



\$30,000-\$39,000.....	3
\$40,000 or more.....	4
\$Don't know.....	5

**Thank you for your cooperation.**

## **Appendix C**

## RECYCLED PAPER SCOOP HPT

Table 1-1

Q.3 AGE  
BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
18-34	216 45.7	110 45.8	106 45.5
35-50	159 33.6	82 34.2	77 33.0
51-65	98 20.7	48 20.0	50 21.5

## RECYCLED PAPER SCOOP HPT

Table 2-1

Q.6 TYPE OF DWELLING RESIDE IN  
BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
APARTMENT/CONDOMINIUM	84 17.8	33 13.8	51 21.9
TOWNHOUSE	29 6.1	16 6.7	13 5.6
DUPLEX	14 3.0	4 1.7	10 4.3
HOUSE	342 72.3	185 77.1	157 67.4
MOBILE HOME	4 .8	2 .8	2 .9
OTHER	-	-	-
NOT STATED	-	-	-



## RECYCLED PAPER SCOOP HPT

Table 3-1

9.7 SIZE OF LAUNDRY DETERGENT BOX USUALLY BUY  
 BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
4 LITRE	24 5.1	13 5.4	11 4.7
5 LITRE	126 26.6	54 22.5	72 30.9
8 LITRE	24 5.1	15 6.3	9 3.9
10 LITRE	305 64.5	159 66.3	146 62.7
OTHER	-	-	-
NOT STATED	-	-	-

RECYCLED PAPER SCOOP HPT

Table 4-1

Q-9 TYPE OF LAUNDRY SOAP OR DETERGENT USED IN THE PAST 4 WEEKS  
 BASE: TOTAL INTERVIEWS

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
	-----	-----	-----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
NET:TIDE	422 89.2	217 90.4	205 88.0
TIDE POWDER - REGULAR	234 49.5	118 49.2	116 49.8
TIDE POWDER - UNSCENTED	94 19.9	50 20.8	44 18.9
TIDE POWDER - BLEACH	118 24.9	65 27.1	53 22.7
TIDE POWDER - FREE	79 16.7	46 19.2	33 14.2
SUNLIGHT	122 25.8	61 25.4	61 26.2
CHEER	95 20.1	45 18.8	50 21.5
ABC	63 13.3	36 15.0	27 11.6
IVORY SNOW	34 7.2	17 7.1	17 7.3
NO-NAME/STORE BRANDS	17 3.6	10 4.2	7 3.0
LIQUID TIDE	16 3.4	10 4.2	6 2.6
BOLD-3	12 2.5	4 1.7	8 3.4
WISK	11 2.3	5 2.1	6 2.6
ALL	7 1.5	3 1.3	4 1.7

Continued

RECYCLED PAPER SCOOP HPT

Table 4-1

Q.9 TYPE OF LAUNDRY SOAP OR DETERGENT USED IN THE PAST 4 WEEKS  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
ARCTIC POWER	6 1.3	2 .8	4 1.7
OXYDOL	3 .6	1 .4	2 .9
FAB	2 .4	2 .8	-
SURF	2 .4	-	2 .9
DYNAMO	1 .2	1 .4	-
DREFT	-	-	-
OTHER	7 1.5	2 .8	5 2.1

## RECYCLED PAPER SCOOP HPT

Table 5-1

Q.10 TYPE OF LAUNDRY SOAP OR DETERGENT USED MOST OFTEN IN THE PAST 3 MONTHS  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
NET:TIDE -----	346 73.2	180 75.0	166 71.2
TIDE POWDER - REGULAR	178 37.6	92 38.3	86 36.9
TIDE POWDER - UNSCENTED	56 11.8	30 12.5	26 11.2
TIDE POWDER - BLEACH	65 13.7	28 11.7	37 15.9
TIDE POWDER - FREE	52 11.0	32 13.3	20 8.6
SUNLIGHT	45 9.5	20 8.3	25 10.7
CHEER	42 8.9	18 7.5	24 10.3
ABC	20 4.2	9 3.8	11 4.7
LIQUID TIDE	10 2.1	8 3.3	2 .9
IVORY SNOW	5 1.1	2 .8	3 1.3
ALL	3 .6	2 .8	1 .4
ARCTIC POWER	3 .6	2 .8	1 .4
BOLD-3	3 .6	1 .4	2 .9
NO-NAME/STORE BRANDS	3 .6	2 .8	1 .4

Continued



RECYCLED PAPER SCOOP HPT

Table 5-1

Q.10 TYPE OF LAUNDRY SOAP OR DETERGENT USED MOST OFTEN IN THE PAST 3 MONTHS  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
SURF	1 .2	-	1 .4
WISK	1 .2	-	1 .4
DREFT	-	-	-
DYNAMO	-	-	-
FAB	-	-	-
OXYDOL	-	-	-
OTHER	1 .2	1 .4	-
NO USUAL	4 .8	2 .8	2 .9

RECYCLED PAPER SCOOP HPT

Table 6-1

Q.1 OVERALL OPINION OF TIDE DETERGENT  
BASE: TOTAL INTERVIEWS

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	159 33.6	80 33.3	79 33.9
VERY GOOD 4	208 44.0	103 42.9	105 45.1
GOOD 3	92 19.5	53 22.1	39 16.7
FAIR 2	12 2.5	4 1.7	8 3.4
POOR 1	2 .4	-	2 .9
DON'T KNOW/NOT STATED	-	-	-
MEAN	4.08	4.08	4.08
STANDARD DEVIATION	.815	.784	.846
STANDARD ERROR	.037	.051	.055

RECYCLED PAPER SCOOP HPT

Table 7-1

Q.2 ASPECTS DISLIKED ABOUT TIDE DETERGENT  
BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
STRONG SCENT/HAD A SCENT/PREFER UNSCENTED DETERGENTS	25 5.3	13 5.4	12 5.2
DIDN'T REMOVE STAINS/TOUGH/GREASY STAINS	22 4.7	10 4.2	12 5.2
NOT AS GOOD ON WHITES/HAD TO USE A BLEACH/DIDN'T GET WHITES WHITE	22 4.7	11 4.6	11 4.7
DOESN'T DISSOLVE/RINSE WELL/LEAVES RESIDUE/DOESN'T MIX WELL	22 4.7	14 5.8	8 3.4
DIDN'T CLEAN WELL/INEFFECTIVE/DIDN'T REMOVE DIRT	15 3.2	10 4.2	5 2.1
DIDN'T CLEAN AS WELL AS OTHER TIDE(S)	12 2.5	5 2.1	7 3.0
TOO SUDSY/TOO MANY SUDS	11 2.3	7 2.9	4 1.7
NOT PHOSPHATE FREE	8 1.7	6 2.5	2 .9
ALLERGIC REACTION/IRRITATED SKIN	7 1.5	3 1.3	4 1.7
WEAK SCENT/NOT LASTING/STRONG ENOUGH	5 1.1	2 .8	3 1.3
CAUSED CHILD/BABY RASH	4 .8	3 1.3	1 .4
NOT AS GOOD ON COLOURED CLOTHES	3 .6	1 .4	2 .9
PREFER A LIQUID DETERGENT	3 .6	2 .8	1 .4

Continued

RECYCLED PAPER SCOOP RPT

Table 7-1

Q.2 ASPECTS DISLIKED ABOUT TIDE DETERGENT  
BASE:TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
DETERGENT IS CLUMPED TOGETHER	3 .6	2 .8	1 .4
DISLIKED SCOOP	3 .6	1 .4	2 .9
DIDN'T CLEAN AS WELL AS OTHER DETERGENTS	2 .4	1 .4	1 .4
DOESN'T CONTAIN A SOFTENER	2 .4	1 .4	1 .4
NOT SUDSY/BUBBLY ENOUGH	2 .4	-	2 .9
EXPENSIVE	2 .4	2 .8	-
MADE CLOTHES WRINKLY	1 .2	1 .4	-
NOT AS CONCENTRATED/HAD TO USE LOTS OF IT	1 .2	-	1 .4
HAD TO PRE-SOAK	1 .2	1 .4	-
NOT BIODEGRADABLE	1 .2	1 .4	-
AVERAGE/NOTHING SPECIAL ABOUT IT/NOT SUPERIOR TO OTHERS	1 .2	-	1 .4
CLOTHES DON'T FEEL AS FRESH	-	-	-
NOT GOOD WITH HARD WATER	-	-	-
OTHER MENTIONS	5 1.1	-	5 2.1

Continued



RECYCLED PAPER SCOOP HPT

Table 7-1

Q.2 ASPECTS DISLIKED ABOUT TIDE DETERGENT  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
NOTHING DISLIKED	323 68.3	162 67.5	161 69.1

## RECYCLED PAPER SCOOP HPT

Table 8-1

Q.3 ASPECTS LIKED ABOUT TIDE DETERGENT  
BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
GETS CLOTHES CLEAN/WORKS WELL/CLEANS BETTER	257 54.3	142 59.2	115 49.4
NICE/PLEASANT/FRESH SCENT/CLEAN/LEMON SCENT	121 25.6	62 25.8	59 25.3
GETS WHITES WHITER/GOOD FOR WHITE CLOTHES/DON'T NEED BLEACH	95 20.1	47 19.6	48 20.6
GOOD OVERALL PERFORMANCE/WORKS WELL	51 10.8	22 9.2	29 12.4
REMOVES STAINS/TOUGH STAINS	49 10.4	18 7.5	31 13.3
BRIGHTER RESULTS/COLOURS BETTER	49 10.4	22 9.2	27 11.6
STRONG/CONCENTRATED/ DON'T HAVE TO USE A LOT OF IT	39 8.2	25 10.4	14 6.0
LIGHT SCENT/NOT OVERPOWERING	31 6.6	19 7.9	12 5.2
DISSOLVES WELL/NO RESIDUE ON CLOTHES/MIXES WELL/RINSES	26 5.5	8 3.3	18 7.7
NO ALLERGIC REACTIONS TO IT	11 2.3	6 2.5	5 2.1
GOOD IN COLD/DISSOLVES IN COLD BETTER	10 2.1	6 2.5	4 1.7
SUDSY/LOTS OF SUDS/ BUBBLES	10 2.1	7 2.9	3 1.3
NOT TOO MANY SUDS/ BUBBLES	8 1.7	4 1.7	4 1.7

Continued

RECYCLED PAPER SCOOP HPT

Table 8-1

Q.3 ASPECTS LIKED ABOUT TIDE DETERGENT  
BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
AS GOOD AS/NO BETTER THAN ANY OTHER DETERGENT	8 1.7	7 2.9	1 .4
SCOOP INSIDE IT	7 1.5	2 .8	5 2.1
PERFORMS WELL IN ANY TEMPERATURE WATER	6 1.3	3 1.3	3 1.3
LEAVES CLOTHES SMELLING/ FEELING FRESH/SMELL STAYS WITH CLOTHES	5 1.1	4 1.7	1 .4
GOOD ON BABY'S CLOTHES/ MAKES CLOTHES FEEL SOFT	5 1.1	1 .4	4 1.7
DOESN'T FADE COLOURS	2 .4	-	2 .9
REMOVES ODOURS	2 .4	1 .4	1 .4
SOFT POWDER	2 .4	2 .8	-
NO STATIC CLING	1 .2	-	1 .4
PHOSPHATE FREE	1 .2	-	1 .4
RECYCLABLE BOX/CUP	1 .2	-	1 .4
BOX EASY TO OPEN	1 .2	-	1 .4
OTHER MENTIONS	2 .4	-	2 .9
NOTHING LIKED	26 5.5	12 5.0	14 6.0

## RECYCLED PAPER SCOOP HPT

Table 9-1

Q.4A RATING OF TIDE ON "CLEANING CLOTHES"  
 BASE: TOTAL INTERVIEWS

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
	-----	-----	-----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	176 37.2	94 39.2	82 35.2
VERY GOOD 4	217 45.9	104 43.3	113 48.5
GOOD 3	67 14.2	35 14.6	32 13.7
FAIR 2	8 1.7	5 2.1	3 1.3
POOR 1	5 1.1	2 .8	3 1.3
DON'T KNOW/NOT STATED	-	-	-
MEAN	4.16	4.18	4.15
STANDARD DEVIATION	.806	.815	.796
STANDARD ERROR	.037	.053	.052

RECYCLED PAPER SCOOP HPT

Table 10-1

Q.4B RATING OF TIDE ON "WHITENING CLOTHES"  
 BASE:TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	124 26.2	50 20.8	74 31.8
VERY GOOD 4	198 41.9	108 45.0	90 38.6
GOOD 3	118 24.9	62 25.8	56 24.0
FAIR 2	24 5.1	15 6.3	9 3.9
POOR 1	6 1.3	2 .8	4 1.7
DON'T KNOW/NOT STATED	3 .6	3 1.3	-
MEAN	3.87	3.80	3.95
STANDARD DEVIATION	.904	.872	.930
STANDARD ERROR	.042	.057	.061



RECYCLED PAPER SCOOP HPT

Table 11-1

Q.4C RATING OF TIDE ON "PACKAGE IT COMES IN"  
 BASE:TOTAL INTERVIEWS

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	106 22.4	43 17.9	63 27.0
VERY GOOD 4	167 35.3	88 36.7	79 33.9
GOOD 3	165 34.9	86 35.8	79 33.9
FAIR 2	23 4.9	15 6.3	8 3.4
POOR 1	9 1.9	5 2.1	4 1.7
DON'T KNOW/NOT STATED	3 .6	3 1.3	-
MEAN	3.72	3.63	3.81
STANDARD DEVIATION	.930	.922	.930
STANDARD ERROR	.043	.060	.061

## RECYCLED PAPER SCOOP HPT

Table 12-1

9.5A DISLIKES ABOUT PACKAGING  
BASE:TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
TOO BIG/LARGE	43 9.1	23 9.6	20 8.6
BOX NOT RECYCLABLE/NOT BIODEGRADABLE/ ENVIRONMENTALLY WASTEFUL	23 4.9	14 5.8	9 3.9
NOT RESEALABLE/CAN'T REPLACE LID TIGHTLY	20 4.2	13 5.4	7 3.0
HARD TO CARRY AROUND	19 4.0	10 4.2	9 3.9
HARD TO STORE/DIFFICULT/ AWKWARD/TOO BULKY TO STORE	16 3.4	11 4.6	5 2.1
AWKWARD/DIFFICULT TO CARRY	14 3.0	8 3.3	6 2.6
BULKY/TOO BULKY	13 2.7	8 3.3	5 2.1
SPILLS EASILY AFTER OPENING/TOO MESSY	11 2.3	7 2.9	4 1.7
TOO HEAVY TO CARRY	10 2.1	5 2.1	5 2.1
HARD TO OPEN	10 2.1	3 1.3	7 3.0
CUP FELL APART/TOO MESSY	9 1.9	1 .4	8 3.4
HARD TO DISPOSE OF/TOO BIG TO DISPOSE OF	6 1.3	4 1.7	2 .9
CUP UNNECESSARY	6 1.3	6 2.5	-
ZIP LID FLOPS OVER	3 .6	3 1.3	-

Continued

## RECYCLED PAPER SCOOP HPT

Table 12-1

Q.5A DISLIKES ABOUT PACKAGING  
BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
DISLIKE THE ZIP LID (NOT SPECIFIED FURTHER)	3 .6	2 .8	1 .4
CARDBOARD GETS SOGGY	3 .6	2 .8	1 .4
SHOULD PROVIDE DIRECTIONS ABOUT HOW MUCH TO USE	3 .6	2 .8	1 .4
ZIP TOP BREAKS OFF/HARD TO GET INTO	2 .4	2 .8	-
ZIP LID/LOCK BREAKS NAILS	2 .4	2 .8	-
PREFER A POUR SPOUT	2 .4	2 .8	-
A LOT OF GLUE ON BOTTOM OF BOX	2 .4	2 .8	-
ENVIRONMENTALLY HARMFUL DYES	2 .4	2 .8	-
ONLY TWO-THIRDS FULL/NOT 100% FULL	2 .4	1 .4	1 .4
MATERIAL OF CUP/MADE OF PAPER/PLASTIC	2 .4	2 .8	-
HANDLE CUTS INTO YOUR HAND	1 .2	-	1 .4
WOULD PREFER A SMALLER OPENING	1 .2	1 .4	-
DISLIKE COLOUR/APPEARANCE ON BOX	1 .2	-	1 .4
PACKAGING FOR DIFFERENT TYPES OF TIDE ARE TOO SIMILAR	1 .2	-	1 .4

Continued

## RECYCLED PAPER SCOOP HPT

Table 12-1

Q.5A DISLIKES ABOUT PACKAGING  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
TOO SMALL	1 .2	-	1 .4
OTHER MENTIONS	5 1.1	1 .4	4 1.7
NOTHING DISLIKED	302 63.8	144 60.0	158 67.8

## RECYCLED PAPER SCOOP HPT

Table 13-1

Q.58 LIKES ABOUT PACKAGING  
BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EASY TO OPEN/ZIP TOP MAKES EASY TO OPEN/NO NEED TO USE A KNIFE	154 32.6	80 33.3	74 31.8
HAS HANDLE/EASIER TO CARRY	141 29.8	71 29.6	70 30.0
COLOURFUL/BRIGHT/ COLOURFUL PACKAGE	89 18.8	47 19.6	42 18.0
FLIP TOP/ZIP TOP	74 15.6	41 17.1	33 14.2
LARGE BOX/GOOD SIZE/LOTS OF SOAP/LASTS LONG TIME	48 10.1	23 9.6	25 10.7
PACKAGE OPENS COMPLETELY/WIDE OPENING	43 9.1	25 10.4	18 7.7
CUP/CUP AVAILABLE TO MEASURE/USEFUL CUP/SCOOP	42 8.9	27 11.3	15 6.4
ATTENTION-GETTING/ EYE-CATCHING/ATTRACTIVE	40 8.5	19 7.9	21 9.0
RECYCLABLE/BOX MADE FROM RECYCLABLE MATERIAL	28 5.9	13 5.4	15 6.4
RECOGNIZABLE/EASY TO RECOGNIZE ON SHELF	25 5.3	14 5.8	11 4.7
STRONG/STURDY BOX	20 4.2	10 4.2	10 4.3
EASIER TO MEASURE THAN POURING WAS	14 3.0	11 4.6	3 1.3
EASY TO STORE/COMPACT	11 2.3	6 2.5	5 2.1
LARGE/BOLD LETTERING	10 2.1	6 2.5	4 1.7

Continued



## RECYCLED PAPER SCOOP HPT

Table 13-1

Q.58 LIKES ABOUT PACKAGING  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
TAB PULL A GOOD IDEA/ MAKES IT EASIER TO OPEN	9 1.9	5 2.1	4 1.7
INSTRUCTIONS ON BOX	9 1.9	6 2.5	3 1.3
I LIKED IT (NOT SPECIFIED FURTHER)	6 1.3	4 1.7	2 .9
CONVENIENT (NOT SPECIFIED FURTHER)	4 .8	2 .8	2 .9
CAN USE BOX FOR OTHER PURPOSES	3 .6	1 .4	2 .9
BOX LOCKS UP AGAIN	2 .4	-	2 .9
COMES IN VARIOUS SIZES	1 .2	1 .4	-
MATERIAL OF SCOOP/PAPER SCOOP/PLASTIC SCOOP	1 .2	-	1 .4
OTHER MENTIONS	-	-	-
NOTHING LIKED	45 9.5	19 7.9	26 11.2

## RECYCLED PAPER SCOOP HPT

Table 14-1

Q.6A SUGGESTIONS FOR IMPROVEMENT ON PACKAGING  
BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
MAKE IT SMALLER/MORE COMPACT	49 10.4	32 13.3	17 7.3
MAKE IT RESEALABLE	33 7.0	15 6.3	18 7.7
MAKE IT RECYCLABLE/USE RECYCLABLE/MORE ENVIRONMENTALLY FRIENDLY MATERIAL	33 7.0	17 7.1	16 6.9
MAKE IT EASIER TO OPEN	13 2.7	6 2.5	7 3.0
MAKE IT EASIER TO CARRY	11 2.3	4 1.7	7 3.0
SHOULD HAVE BUILT-IN/ PLASTIC SPOUT	9 1.9	5 2.1	4 1.7
MAKE IT WATERPROOF/LINE BOTTOM WITH MOISTURE SEAL	8 1.7	4 1.7	4 1.7
CHANGE COLOUR/WHITER COLOUR/CHANGE STYLE OF DESIGN	8 1.7	5 2.1	3 1.3
HANDLES ON SIDE	7 1.5	4 1.7	3 1.3
STRONGER MEASURING CUP/ SCOOP	7 1.5	1 .4	6 2.6
DIFFERENT SHAPE	6 1.3	5 2.1	1 .4
MAKE IT EASIER TO GRAB/ HOLD/GRIP TAB	4 .8	3 1.3	1 .4
PUT HANDLE ON SCOOP	4 .8	4 1.7	-

Continued

## RECYCLED PAPER SCOOP HPT

Table 14-1

Q.6A SUGGESTIONS FOR IMPROVEMENT ON PACKAGING  
BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
PREFER A PAIL/RESEALABLE PAIL	4 .8	3 1.3	1 .4
PLASTIC BAGS/LESS GARBAGE	4 .8	2 .8	2 .9
CHANGE LETTERING/WRITING	4 .8	2 .8	2 .9
MORE PRODUCT INFORMATION ON BOX	4 .8	2 .8	2 .9
DIFFERENT OPENING/OP TOP RATHER THAN SIDES	3 .6	-	3 1.3
SOFTER HANDLE/EASIER TO HOLD/HANDLE	3 .6	2 .8	1 .4
MAKE BOX REUSABLE/ REFILLABLE	3 .6	2 .8	1 .4
FILL SOAP TO TOP OF BOX	3 .6	3 1.3	-
DON'T INCLUDE THE SCOOP	2 .4	2 .8	-
BIGGER BOX	2 .4	1 .4	1 .4
POUR SPOUT INSTEAD OF ZIP TOP	1 .2	1 .4	-
MADE A THICKER/STRONGER HANDLE	1 .2	-	1 .4
MAKE IT SO THAT THE TOP WILL STAY OPEN	1 .2	1 .4	-
MAKE IT PHOSPHATE FREE	1 .2	1 .4	-

Continued

## RECYCLED PAPER SCOOP HPT

Table 14-1

Q.6A SUGGESTIONS FOR IMPROVEMENT ON PACKAGING  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
REPLACE PLASTIC CUP WITH A CARDBOARD ONE	1 .2	1 .4	-
PUT PEOPLE'S FACES ON IT	1 .2	-	1 .4
OTHER MENTIONS	2 .4	-	2 .9
NOTHING/GOOD AS IS	277 58.6	132 55.0	145 62.2

RECYCLED PAPER SCOOP HPT

Table 14-2

Q.6A SUGGESTIONS FOR IMPROVEMENT ON PACKAGING  
 BASE:TOTAL INTERVIEWS  
 BY IMPORTANCE OF IMPROVEMENTS (ALL SUGGESTING IMPROVEMENTS)

	TOTAL										PLASTIC SCOOP										PAPER SCOOP															
	EXTMLY		VERY		QUITE		SLITLY		MT VRY		DK/NS	EXTMLY		VERY		QUITE		SLITLY		MT VRY		DK/NS	EXTMLY		VERY		QUITE		SLITLY		MT VRY		DK/NS			
	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0		IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0		IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0	IMPNT	100.0		IMPNT	100.0	
TOTAL INTERVIEWS	28	62	32	50	23	1	14	30	19	30	14	1	14	30	19	30	14	1	14	30	19	30	14	1	14	30	19	30	14	1	14	30	19	30	14	1
MAKE IT RECYCLABLE/USE RECYCLABLE/MORE ENVIRONMENTALLY FRIENDLY MATERIAL	11	16	4	2	-	-	4	8	4	1	-	-	4	8	4	1	-	-	4	8	4	1	-	-	7	8	-	1	-	-	-	-	-	-	-	
MAKE IT SMALLER/MORE COMPACT	7	16	5	13	8	-	5	11	3	8	5	-	5	11	3	8	5	-	5	11	3	8	5	-	2	5	2	5	2	5	2	5	2	5	2	
MAKE IT RESEALABLE	4	10	6	9	4	-	2	3	4	3	3	-	2	3	4	3	3	-	2	3	4	3	3	-	2	3	4	3	3	3	3	3	3	3	3	
MAKE IT EASIER TO OPEN	4	4	1	3	1	-	2	-	-	3	1	-	2	-	-	3	1	-	2	-	-	3	1	-	2	-	-	4	1	-	-	-	-	-	-	
SHOULD HAVE BUILT-IN/ PLASTIC SPOUT	2	2	1	1	3	-	1	1	1	1	1	-	1	1	1	1	1	-	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	1	
PREFER A PAIL/RESEALABLE PAIL	2	-	1	-	1	-	1	-	1	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
POUR SPOUT INSTEAD OF ZIP TOP	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HANDLE A THICKER/STRONGER HANDLE	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DIFFERENT SHAPE	1	-	1	2	2	-	1	-	1	1	2	-	1	-	1	1	2	-	1	-	1	1	2	-	1	-	1	-	-	-	-	-	-	-	-	
STRONGER MEASURING CUP/ SCOOP	1	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MAKE BOX REUSABLE/ REFILLABLE	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REPLACE PLASTIC CUP WITH A CARDBOARD ONE	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Continued





RECYCLED PAPER SCOOP HPT

Table 14-2

Q.6A SUGGESTIONS FOR IMPROVEMENT ON PACKAGING  
 BASE:TOTAL INTERVIEWS  
 BY IMPORTANCE OF IMPROVEMENTS (ALL SUGGESTING IMPROVEMENTS)

	TOTAL										PLASTIC SCOOP						PAPER SCOOP																				
	28		62		32		50		23		1		14		30		19		30		14		1		14		30		19		30		14		1		
	EXTMPLY	IMPTNT	VERY	QUITE	SLITLY	NT	VRV	DK/NS	EXTMPLY	IMPTNT	VERY	QUITE	SLITLY	NT	VRV	DK/NS	EXTMPLY	IMPTNT	VERY	QUITE	SLITLY	NT	VRV	DK/NS	EXTMPLY	IMPTNT	VERY	QUITE	SLITLY	NT	VRV	DK/NS					
TOTAL INTERVIEWS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
PLASTIC BAGS/LESS GARBAGE	-	2	3.2	1	1	2.0	-	-	-	-	-	2	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DON'T INCLUDE THE SCOOP	-	-	1	3.1	1	3.1	-	-	1	100.0	-	-	-	1	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
FILL SOAP TO TOP OF BOX	-	-	1	3.1	1	3.1	-	-	2	4.0	-	-	-	1	5.3	-	-	-	-	-	2	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PUT PEOPLE'S FACES ON IT	-	1	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MORE PRODUCT INFORMATION ON BOX	-	1	1.6	3	9.4	-	-	-	-	-	-	1	3.3	1	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER MENTIONS	-	1	1.6	-	-	-	-	1	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NOTHING/GOOD AS IS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## RECYCLED PAPER SCOOP HPT

Table 15-1

Q.7B IMPORTANCE OF IMPROVEMENTS  
 BASE: ALL WHO SUGGESTED AN IMPROVEMENT

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	196 100.0	108 100.0	88 100.0
EXTREMELY IMPORTANT	28 14.3	14 13.0	14 15.9
VERY IMPORTANT	62 31.6	30 27.8	32 36.4
QUITE IMPORTANT	32 16.3	19 17.6	13 14.8
SLIGHTLY IMPORTANT	50 25.5	30 27.8	20 22.7
NOT VERY IMPORTANT	23 11.7	14 13.0	9 10.2
DON'T KNOW/NOT STATED	1 .5	1 .9	0 0.0

RECYCLED PAPER SCOOP HPT

Table 16-1

Q.8 WHETHER NOTICED SCOOP INSIDE OF BOX  
 BASE:TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
YES	471 99.6	238 99.2	233 100.0
NO	2 .4	2 .8	-
DON'T KNOW/NOT STATED	-	-	-

## RECYCLED PAPER SCOOP HPT

Table 17-1

Q.9 LOCATION OF SCOOP  
 BASE:ALL WHO NOTICED SCOOP

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	471 100.0	238 100.0	233 100.0
ON TOP OF THE DETERGENT	260 55.2	110 46.2	150 64.4
PARTIALLY BURIED IN THE DETERGENT	176 37.4	107 45.0	69 29.6
COMPLETELY BURIED IN THE DETERGENT	17 3.6	11 4.6	6 2.6
DON'T REMEMBER	18 3.8	10 4.2	8 3.4



## RECYCLED PAPER SCOOP HPT

Table 18-1

Q.10A WHETHER USED THE SCOOP  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
YES	419 88.6	213 88.8	206 88.4
NO	53 11.2	26 10.8	27 11.6
DON'T RECALL	1 .2	1 .4	-

RECYCLED PAPER SCOOP HPT

Table 19-1

q.10B REASON(S) FOR NOT USING THE SCOOP  
 BASE:ALL WHO DID NOT USE SCOOP

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
TOTAL INTERVIEWS	53 100.0	26 100.0	27 100.0
HAVE OWN CUP/SCOOP/ DISPENSER	30 56.6	14 53.8	16 59.3
RE-USED OTHER TIDE SCOOPS	9 17.0	3 11.5	6 22.2
USE SMALL AMOUNT OF SOAP	4 7.5	4 15.4	-
WAS IN BOTTOM OF BOX	2 3.8	1 3.8	1 3.7
SCOOP BROKE/BECAME DAMAGED	2 3.8	1 3.8	1 3.7
OPEN BOX JUST ENOUGH TO POUR SOAP OUT	2 3.8	1 3.8	1 3.7
NO SCOOP INSIDE	1 1.9	1 3.8	-
SCOOP LOOKED LIKE IT WOULD BREAK EASILY	1 1.9	-	1 3.7
NEVER USE/HABIT/THROW OUT/DON'T NEED	1 1.9	-	1 3.7
SCOOP NEEDS HANDLE	-	-	-
OTHER MENTIONS	1 1.9	1 3.8	-
DON'T KNOW/NOT STATED	1 1.9	-	1 3.7

## RECYCLED PAPER SCOOP HPT

Table 20-1

q.11A AMOUNT OF TIDE USUALLY MEASURED PER LOAD OF LAUNDRY (WHEN USED THE SCOOP)  
 BASE: ALL WHO USED THE SCOOP

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	419 100.0	213 100.0	206 100.0
FILL THE CUP TO THE VERY TOP	35 8.4	24 11.3	11 5.3
FILL THE CUP TO THE LINE	206 49.2	91 42.7	115 55.8
FILL THE CUP A LITTLE LOWER THAN THE LINE	90 21.5	52 24.4	38 18.4
FILL THE CUP A LOT LOWER THAN THE LINE	50 11.9	27 12.7	23 11.2
NO USUAL/DEPENDS ON SIZE OF LOAD	34 8.1	17 8.0	17 8.3
DON'T KNOW	4 1.0	2 .9	2 1.0

RECYCLED PAPER SCOOP HPT

Table 21-1

Q.118 RATING OF SCOOP  
BASE:TOTAL INTERVIEWS

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	54 11.4	32 13.3	22 9.4
VERY GOOD 4	114 24.1	64 26.7	50 21.5
GOOD 3	169 35.7	97 40.4	72 30.9
FAIR 2	66 14.0	23 9.6	43 18.5
POOR 1	60 12.7	18 7.5	42 18.0
DON'T KNOW/NOT STATED	10 2.1	6 2.5	4 1.7
MEAN	3.08	3.29	2.86
STANDARD DEVIATION	1.169	1.067	1.226
STANDARD ERROR	.054	.070	.081

## RECYCLED PAPER SCOOP HPT

Table 22-1

Q.11C WHETHER SCOOP BECAME DAMAGED DURING USE  
 BASE:ALL WHO USED THE SCOOP

	TOTAL	PLASTIC SCOOP	PAPER SCOOP
TOTAL INTERVIEWS	419 100.0	213 100.0	206 100.0
YES	90 21.5	19 8.9	71 34.5
NO	329 78.5	194 91.1	135 65.5
DON'T RECALL	-	-	-

RECYCLED PAPER SCOOP HPT

Table 23-1

Q.11D MANNER IN WHICH SCOOP DAMAGED  
 BASE: ALL WHO USED THE SCOOP AND FOUND IT TO BECOME DAMAGED

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	90 100.0	19 100.0	71 100.0
RIPPED DOWN THE SIDE/ CRACKED DOWN CENTRE/ CRACKED IN TWO	33 36.7	17 89.5	16 22.5
COLLAPSED WHEN WET/ SOGGY/BECAME SOGGY/HUSHY	25 27.8	-	25 35.2
STARTED TO FALL APART/ CAVE IN/WENT LIMP	21 23.3	1 5.3	20 28.2
BECAME CRUSHED	9 10.0	1 5.3	8 11.3
FOLDS/LIKE AN ACCORDIAN	9 10.0	-	9 12.7
FRAYED AROUND EDGES	8 8.9	2 10.5	6 8.5
OUT OF SHAPE FROM BEING SQUEEZED	3 3.3	1 5.3	2 2.8
LIP ROLLED UP	2 2.2	-	2 2.8
DYE FROM CUP CAME OFF ON HANDS	1 1.1	-	1 1.4
COLOUR FADES	1 1.1	-	1 1.4
DETERGENT STUCK TO IT	1 1.1	-	1 1.4
OTHER MENTIONS	-	-	-
DON'T KNOW/NOT STATED	3 3.3	-	3 4.2



RECYCLED PAPER SCOOP HPT

Table 24-1

Q. 11E HOW LONG SCOOP LASTED BEFORE BECOMING DAMAGED  
 BASE: ALL WHO USED THE SCOOP AND FOUND IT TO BECOME DAMAGED

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	90 100.0	19 100.0	71 100.0
0-5 TIMES	27 30.0	5 26.3	22 31.0
6-10 TIMES	29 32.2	6 31.6	23 32.4
11-20 TIMES	22 24.4	5 26.3	17 23.9
OVER 20 TIMES	7 7.8	3 15.8	4 5.6
DON'T KNOW	5 5.6	.	5 7.0

RECYCLED PAPER SCOOP HPT

Table 25-1

Q.12A WHETHER OR NOT FINISHED BOX OF TIDE  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
YES, FINISHED THE BOX	84 17.8	54 22.5	30 12.9
NO, DID NOT FINISH	387 81.8	186 77.5	201 86.3
NOT STATED/DON'T KNOW	2 .4	-	2 .9

## RECYCLED PAPER SCOOP HPT

Table 26-1

Q. 12B WHAT WAS DONE TO SCOOP AFTER DETERGENT FINISHED  
 BASE-ALL WHO FINISHED THE BOX OF DETERGENT

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	84 100.0	54 100.0	30 100.0
THREW SCOOP OUT	34 40.5	20 37.0	14 46.7
KEPT THE SCOOP TO USE WITH ANOTHER BOX OF DETERGENT	34 40.5	25 46.3	9 30.0
KEPT THE SCOOP TO USE SOME OTHER WAY	12 14.3	9 16.7	3 10.0
LEFT FOR KIDS TO PLAY WITH	-	-	-
DON'T KNOW	5 6.0	1 1.9	4 13.3

RECYCLED PAPER SCOOP RPT

Table 27-1

Q.13A WHETHER LIKE RECEIVING A SCOOP WITH EVERY TIDE BOX  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
YES	243 51.4	113 47.1	130 55.8
NO	226 47.8	127 52.9	99 42.5
DON'T KNOW/NOT STATED	4 .8	-	4 1.7

RECYCLED PAPER SCOOP HPT

Table 28-1

Q.138 WHY WOULD NOT LIKE RECEIVING A SCOOP WITH EVERY TIDE BOX  
 BASE:ALL WHO WOULD NOT LIKE RECEIVING A SCOOP WITH EVERY TIDE BOX

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	226 100.0	127 100.0	99 100.0
NOT NECESSARY	90 39.8	52 40.9	38 38.4
SAVE MY SCOOP/THEY ARE RE-USABLE	85 37.6	47 37.0	38 38.4
A WASTE	32 14.2	24 18.9	8 8.1
BELIEVE IN REDUCING GARBAGE/BAD FOR ENVIRONMENT	29 12.8	15 11.8	14 14.1
USE OWN MEASURING CUP	17 7.5	13 10.2	4 4.0
DURABLE ENOUGH TO REUSE	17 7.5	15 11.8	2 2.0
WOULD NEED ONE EVERYTIME IF PAPER SCOOP	8 3.5	1 .8	7 7.1
COSTS MORE WITH SCOOP	8 3.5	6 4.7	2 2.0
WOULD NOT KNOW WHICH BOX THEY WERE IN	3 1.3	2 1.6	1 1.0
NOT BIODEGRADABLE	2 .9	2 1.6	-
RARELY USE/DON'T USE IT	2 .9	1 .8	1 1.0
TOO MESSY	1 .4	1 .8	-
DOESN'T HAVE A HANDLE	-	-	-
OTHER MENTIONS	3 1.3	-	3 3.0

Continued

RECYCLED PAPER SCOOP HPT

Table 28-1

Q.138 WHY WOULD NOT LIKE RECEIVING A SCOOP WITH EVERY TIDE BOX  
 BASE: ALL WHO WOULD NOT LIKE RECEIVING A SCOOP WITH EVERY TIDE BOX

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	226 100.0	127 100.0	99 100.0
DON'T KNOW/NOT STATED	2 .9	-	2 2.0



## RECYCLED PAPER SCOOP HPT

Table 29-1

9.14A REACTION TO GETTING A SCOOP ONCE IN A WHILE (ONE OUT OF EVERY THREE BOXES) AND TOLD TO SAVE SCOOP FOR NEXT BOX  
 BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
WOULD LIKE EXTREMELY	183 38.7	102 42.5	81 34.8
WOULD LIKE SLIGHTLY	66 14.0	30 12.5	36 15.5
WOULD NOT CARE ONE WAY OR THE OTHER	123 26.0	61 25.4	62 26.6
WOULD DISLIKE SLIGHTLY	45 9.5	20 8.3	25 10.7
WOULD DISLIKE EXTREMELY	54 11.4	25 10.4	29 12.4
DON'T KNOW/NOT STATED	2 .4	2 .8	0 .

## RECYCLED PAPER SCOOP HPT

Table 30-1

Q.148 REASON(S) FOR LIKING/DISLIKING IDEA OF GETTING A SCOOP ONCE IN A WHILE  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
BETTER FOR ENVIRONMENT/ LESS WASTE	90 19.0	57 23.8	33 14.2
LESS PLASTIC TO WASTE	16 3.4	11 4.6	5 2.1
WASTE TO PRODUCE SO MANY SCOOPS	15 3.2	9 3.8	6 2.6
WASTE TO THROW SCOOPS OUT	21 4.4	10 4.2	11 4.7
SAVE SCOOPS ANYWAYS	67 14.2	30 12.5	37 15.9
NOT NECESSARY TO RECEIVE SCOOP IN EVERY BOX/COULD RE-USE	92 19.5	63 26.3	29 12.4
MIGHT REDUCE COST OF TIDE	12 2.5	9 3.8	3 1.3
DOESN'T MATTER TO ME/ HAVE OWN	46 9.7	19 7.9	27 11.6
SCOOP DIDN'T LAST/BREAKS DOWN	55 11.6	26 10.8	29 12.4
DISLIKE SAVING SCOOPS	7 1.5	4 1.7	3 1.3
WOULD BE OUT OF A SCOOP IF WASN'T IN A BOX	34 7.2	14 5.8	20 8.6
WOULDN'T KNOW WHICH BOX SCOOP WAS IN	42 8.9	30 12.5	12 5.2
WOULD HAVE TO LOOK AROUND FOR OLD SCOOP	8 1.7	6 2.5	2 .9
LIKE TO USE SCOOPS FOR OTHER PURPOSES AS WELL	1 .2	-	1 .4

Continued

## RECYCLED PAPER SCOOP HPT

Table 30-1

Q.14B REASON(S) FOR LIKING/DISLIKING IDEA OF GETTING A SCOOP ONCE IN A WHILE  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
SCOOPS IN BOXES ARE UNNECESSARY/EVERYONE SHOULD HAVE ONE/ SOMETHING AROUND	11 2.3	9 3.8	2 .9
OTHER POSITIVE MENTIONS	8 1.7	-	8 3.4
OTHER NEGATIVE MENTIONS	5 1.1	2 .8	3 1.3
DON'T KNOW/NOT STATED	23 4.9	4 1.7	19 8.2

RECYCLED PAPER SCOOP HPT

Table 30-2

Q.14B REASON(S) FOR LIKING/DISLIKING IDEA OF GETTING A SCOOP ONCE IN A WHILE  
 BASE: TOTAL INTERVIEWS  
 BY REACTION TO GETTING A SCOOP ONCE IN A WHILE (ONE OUT OF EVERY THREE BOXES) AND TOLD TO SAVE SCOOP FOR NEXT BOX

	TOTAL				PLASTIC SCOOP				PAPER SCOOP						
	LIKE EXTMLY	LIKE SLITLY	NOT DISLIKE EXTMLY	DK/NS	LIKE EXTMLY	LIKE SLITLY	NOT DISLIKE EXTMLY	DK/NS	LIKE EXTMLY	LIKE SLITLY	NOT DISLIKE EXTMLY	DK/NS			
TOTAL INTERVIEWS	183 100.0	66 100.0	123 100.0	45 100.0	54 100.0	2 100.0	2 100.0	2 100.0	25 100.0	20 100.0	61 100.0	2 100.0	2 100.0	25 100.0	29 100.0
BETTER FOR ENVIRONMENT/ LESS WASTE	71 38.8	11 16.7	4 3.3	2 4.4	1 1.9	1 50.0	1 50.0	1 50.0	2 100.0	2 100.0	6 20.0	2 4.0	1 50.0	1 3.2	-
LESS PLASTIC TO WASTE	10 5.5	6 9.1	-	-	-	-	-	-	-	-	8 10.0	3 7.8	-	2 2.5	3 8.3
WASTE TO PRODUCE SO MANY SCOOPS	11 6.0	2 3.0	1 .8	-	-	1 50.0	2 6.7	1 50.0	-	-	2 6.7	-	1 50.0	-	1 1.6
WASTE TO THROW SCOOPS OUT	12 6.6	4 6.1	2 1.6	2 2.2	3 3.7	-	1 3.3	1 3.3	1 4.0	1 5.0	-	1 4.0	-	2 6.2	2 8.3
SAVE SCOOPS ANYWAYS	18 9.8	11 16.7	35 28.5	4 4.4	2 5.6	1 50.0	4 13.3	20 32.8	1 5.0	1 5.0	4 12.0	1 3.0	1 50.0	14 17.3	7 19.4
NOT NECESSARY TO RECEIVE SCOOP IN EVERY BOX/COULD RE-USE	56 30.6	10 15.2	20 16.3	3 6.7	3 5.6	-	6 18.0	11 18.0	2 8.0	2 8.0	42 66.0	2 8.0	2 8.0	14 17.3	4 11.1
MIGHT REDUCE COST OF TIDE	9 4.9	-	2 1.6	-	1 1.9	-	1 1.6	1 1.6	1 4.0	-	7 10.0	1 4.0	-	2 2.5	1 1.6
DOESN'T MATTER TO ME/ HAVE OWN	2 1.1	3 4.5	38 30.9	-	3 5.6	-	2 6.7	16 26.2	1 4.0	-	2 6.7	1 4.0	-	2 2.5	2 8.3
SCOOP DIDN'T LAST/BREAKS DOWN	4 2.2	8 12.1	6 4.9	14 31.1	23 42.6	-	3 4.9	6 9.8	10 40.0	6 30.0	3 4.9	6 40.0	-	2 2.5	3 8.3
DISLIKE SAVING SCOOPS	2 1.1	1 1.5	-	2 4.4	2 3.7	-	-	-	1 4.0	1 4.0	-	1 4.0	-	-	1 1.6
WOULD BE OUT OF A SCOOP IF WASN'T IN A BOX	1 .5	5 7.6	-	15 33.3	13 24.1	-	2 6.7	4 6.0	8 32.0	4 16.0	-	8 32.0	-	1 1.2	5 17.2
WOULDN'T KNOW WHICH BOX SCOOP WAS IN	9 4.9	8 12.1	10 8.1	8 17.8	7 13.0	-	5 14.8	9 14.8	4 16.0	6 16.0	9 14.8	4 16.0	-	3 3.7	3 8.3
WOULD HAVE TO LOOK AROUND FOR OLD SCOOP	-	2 3.0	2 1.6	3 6.7	1 1.9	-	1 1.6	1 1.6	1 4.0	3 12.0	1 1.6	1 4.0	-	-	1 1.6

Continued

RECYCLED PAPER SCOOP HPT

Table 30-2

Q.148 REASON(S) FOR LIKING/DISLIKING IDEA OF GETTING A SCOOP ONCE IN A WHILE

BASE:TOTAL INTERVIEWS

BY REACTION TO GETTING A SCOOP ONCE IN A WHILE (ONE OUT OF EVERY THREE BOXES) AND TOLD TO SAVE SCOOP FOR NEXT BOX

	TOTAL			PLASTIC SCOOP			PAPER SCOOP									
	LIKE EXTMLY SLITLY	CARE SLITLY EXTMLY	DK/NS	LIKE EXTMLY SLITLY	NOT DISLIKE EXTMLY	DISLIKE EXTMLY SLITLY	LIKE EXTMLY SLITLY	NOT DISLIKE EXTMLY	DISLIKE EXTMLY SLITLY							
TOTAL INTERVIEWS	183 100.0	66 100.0	123 100.0	45 100.0	54 100.0	2 100.0	102 100.0	30 100.0	61 100.0	20 100.0	25 100.0	81 100.0	36 100.0	62 100.0	25 100.0	29 100.0
LIKE TO USE SCOOPS FOR OTHER PURPOSES AS WELL	-	-	-	1 2.2	-	-	-	-	-	-	-	-	-	-	1 4.0	-
SCOOPS IN BOXES ARE UNNECESSARY/EVERYONE SHOULD HAVE ONE/ SOMETHING AROUND	3 1.6	-	2 1.6	1 2.2	5 9.3	-	3 2.9	-	2 3.3	1 5.0	3 12.0	-	-	-	-	2 6.9
OTHER POSITIVE MENTIONS	5 2.7	3 4.5	-	-	-	-	-	-	-	-	-	5 6.2	3 8.3	-	-	-
OTHER NEGATIVE MENTIONS	-	-	-	1 2.2	4 7.4	-	-	-	-	-	2 8.0	-	-	-	1 4.0	2 6.9
DON'T KNOW/NOT STATED	7 3.8	3 4.5	11 8.9	1 2.2	1 1.9	-	1 1.0	-	3 4.9	-	-	6 7.4	3 8.3	8 12.9	1 4.0	1 3.4

## RECYCLED PAPER SCOOP HPT

Table 31-1

Q.14C WHETHER BELIEVE SCOOP WILL LAST LONG ENOUGH TO USE IN SEVERAL BOXES  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
YES	340 71.9	197 82.1	143 61.4
NO	128 27.1	39 16.3	89 38.2
DON'T KNOW	5 1.1	4 1.7	1 .4



RECYCLED PAPER SCOOP HPT

Table 32-1

Q.15A IMPROVEMENTS WOULD SUGGEST FOR TIDE SCOOP  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
MAKE MORE DURABLE	113 23.9	52 21.7	61 26.2
GIVE IT A HANDLE	106 22.4	70 29.2	36 15.5
GO BACK TO PLASTIC SCOOPS	52 11.0	8 3.3	44 18.9
MAKE IT SMALLER	16 3.4	8 3.3	8 3.4
MAKE THICKER	13 2.7	5 2.1	8 3.4
MAKE MORE ENVIRONMENTALLY FRIENDLY/BIODEGRADABLE/ RECYCLABLE	11 2.3	8 3.3	3 1.3
MAKE IT OUT OF CARDBOARD/PAPER	10 2.1	10 4.2	-
NOT NECESSARY TO PUT ONE IN AT ALL/ONLY NEED ONE CUP	10 2.1	9 3.8	1 .4
GIVE IT A WAXY COVERING	8 1.7	1 .4	7 3.0
PUT MEASURING LINE ON INSIDE OF THE CUP	5 1.1	4 1.7	1 .4
MAKE SCOOP LIKE A SPOON/ EASIER TO HOLD	4 .8	3 1.3	1 .4
USE MORE CARDBOARD	3 .6	-	3 1.3
MAKE SCOOP BIGGER	2 .4	-	2 .9

Continued

## RECYCLED PAPER SCOOP HPT

Table 32-1

Q.15A IMPROVEMENTS WOULD SUGGEST FOR TIDE SCOOP  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
MAKE A DIFFERENT SHAPE	2 .4	1 .4	1 .4
MAKE IT SUCH THAT IT COULD BE USED FOR OTHER PURPOSES	2 .4	-	2 .9
TAKE PRINT OFF THE SCOOP	1 .2	-	1 .4
MAKE SCOOP SEE-THROUGH	1 .2	-	1 .4
GET RID OF DYE ON THE SIDE	1 .2	-	1 .4
PUT A SPOUT ON IT	1 .2	-	1 .4
MAKE IT A BRIGHTER COLOUR	1 .2	1 .4	-
OTHER MENTIONS	8 1.7	6 2.5	2 .9
DON'T KNOW/NOTHING	160 33.8	84 35.0	76 32.6

RECYCLED PAPER SCOOP HPT

Table 32-2

Q.15A IMPROVEMENTS WOULD SUGGEST FOR TIDE SCOOP  
 BASE:TOTAL INTERVIEWS  
 BY IMPORTANCE OF IMPROVEMENTS

	TOTAL				PLASTIC SCOOP				PAPER SCOOP									
	50 100.0	82 100.0	60 100.0	87 100.0	95 100.0	99 100.0	29 100.0	34 100.0	24 100.0	44 100.0	47 100.0	62 100.0	21 100.0	48 100.0	36 100.0	43 100.0	48 100.0	37 100.0
	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	MT VRY IMPNT	DK/NS	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	MT VRY IMPNT	DK/NS	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	MT VRY IMPNT	DK/NS
TOTAL INTERVIEWS	15	31	19	31	17	-	9	13	7	14	9	-	6	18	12	17	8	-
MAKE MORE DURABLE	30.0	37.8	31.7	35.6	17.9	-	31.0	38.2	29.2	31.8	19.1	-	28.6	37.5	33.3	39.5	16.7	-
GIVE IT A HANDLE	9	28	15	33	21	-	7	13	10	24	16	-	2	15	5	9	5	-
	18.0	34.1	25.0	37.9	22.1	-	24.1	38.2	41.7	54.5	34.0	-	9.5	31.3	13.9	20.9	10.4	-
GO BACK TO PLASTIC SCOOPS	7	11	14	13	6	1	2	1	1	2	1	1	5	10	13	11	5	-
	14.0	13.4	23.3	14.9	6.3	1.0	6.9	2.9	4.2	4.5	2.1	1.6	23.8	20.8	36.1	25.6	10.4	-
MAKE MORE ENVIRONMENTALLY FRIENDLY/BIODEGRADABLE/ RECYCLABLE	6	3	1	1	-	-	5	2	-	1	-	-	1	1	1	-	-	-
	12.0	3.7	1.7	1.1	-	-	17.2	5.9	-	2.3	-	-	4.8	2.1	2.8	-	-	-
MAKE IT OUT OF CARDBOARD/PAPER	3	1	3	1	-	2	3	1	3	1	-	2	-	-	-	-	-	-
	6.0	1.2	5.0	1.1	-	2.0	10.3	2.9	12.5	2.3	-	3.2	-	-	-	-	-	-
NOT NECESSARY TO PUT ONE IN AT ALL/ONLY NEED ONE CUP	3	4	2	-	1	-	3	4	1	-	1	-	-	-	1	-	-	-
	6.0	4.9	3.3	-	1.1	-	10.3	11.8	4.2	-	2.1	-	-	-	2.8	-	-	-
MAKE THICKER	2	4	1	2	4	-	-	1	-	2	2	-	2	3	1	-	2	-
	4.0	4.9	1.7	2.3	4.2	-	-	2.9	-	4.5	4.3	-	9.5	6.3	2.8	-	4.2	-
PUT MEASURING LINE ON INSIDE OF THE CUP	2	-	-	3	-	-	2	-	-	2	-	-	-	-	-	-	-	-
	4.0	-	-	3.4	-	-	6.9	-	-	4.5	-	-	-	-	-	-	-	-
GIVE IT A WAXY COVERING	1	3	2	1	1	-	-	-	1	-	-	-	1	3	1	1	1	-
	2.0	3.7	3.3	1.1	1.1	-	-	-	4.2	-	-	-	4.8	6.3	2.8	2.3	2.1	-
MAKE IT SMALLER	1	2	2	3	8	-	-	1	1	1	5	-	1	1	1	2	3	-
	2.0	2.4	3.3	3.4	8.4	-	-	2.9	4.2	2.3	10.6	-	4.8	2.1	2.8	4.7	6.3	-
MAKE IT SUCH THAT IT COULD BE USED FOR OTHER PURPOSES	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-
	2.0	-	-	1.1	-	-	-	-	-	-	-	-	4.8	-	-	2.3	-	-
TAKE PRINT OFF THE SCOOP	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
	-	1.2	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	-

Continued

RECYCLED PAPER SCOOP HPT

Table 32-2

Q.15A IMPROVEMENTS WOULD SUGGEST FOR TIDE SCOOP  
 BASE: TOTAL INTERVIEWS  
 BY IMPORTANCE OF IMPROVEMENTS

	TOTAL				PLASTIC SCOOP				PAPER SCOOP									
	50 100.0	82 100.0	60 100.0	87 100.0	95 100.0	99 100.0	29 100.0	34 100.0	24 100.0	44 100.0	47 100.0	62 100.0	21 100.0	48 100.0	36 100.0	43 100.0	48 100.0	37 100.0
	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	NT VRY IMPNT	DK/NS	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	NT VRY IMPNT	DK/NS	EXTMLY IMPNT	VERY IMPNT	QUITE IMPNT	SLITLY IMPNT	NT VRY IMPNT	DK/NS
TOTAL INTERVIEWS	-	-	-	-	1	1.1	-	-	-	-	-	-	-	-	-	-	1	-
MAKE SCOOP SEE-THROUGH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-
MAKE SCOOP BIGGER	-	1	-	-	1	1.1	-	-	-	-	-	-	-	1	-	-	1	-
	1.2												2.1				2.1	
MAKE A DIFFERENT SHAPE	-	-	1	1	-	-	-	-	-	1	-	-	-	-	1	-	-	-
	1.7	1.7	1.1	1.1	-	-	-	-	2.3	-	-	-	-	2.8	-	-	-	-
USE MORE CARDBOARD	-	1	1	1	-	-	-	-	-	-	-	-	-	1	1	1	-	-
	1.2	1.7	1.7	1.1	-	-	-	-	-	-	-	-	2.1	2.8	2.3	-	-	-
MAKE SCOOP LIKE A SPOON/ EASIER TO HOLD	-	-	2	1	1	1	-	-	1	1	1	-	-	-	1	-	-	-
	3.3	3.3	1.1	1.1	1.1	1.1	-	4.2	2.3	2.1	-	-	-	2.8	-	-	-	-
GET RID OF DYE ON THE SIDE	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
	1.2												2.1					
PUT A SPOUT ON IT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
	1.7			1.1											2.3			
MAKE IT A BRIGHTER COLOUR	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
	1.7							4.2										
OTHER MENTIONS	4	3	1	-	-	-	3	3	-	-	-	-	1	-	1	-	-	-
	8.0	3.7	1.7	-	-	-	10.3	8.8	-	-	-	-	4.8	-	2.8	-	-	-
DON'T KNOW/NOTHING	7	3	4	7	43	96	2	1	3	19	59	5	3	3	3	4	24	37
	14.0	3.7	6.7	8.0	45.3	97.0	6.9	4.2	6.8	40.4	95.2	23.8	6.3	8.3	9.3	50.0	100.0	

## RECYCLED PAPER SCOOP HPT

Table 33-1

Q.15B IMPORTANCE OF IMPROVEMENTS  
 BASE: ALL WHO SUGGESTED AN IMPROVEMENT

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	313 100.0	156 100.0	157 100.0
EXTREMELY IMPORTANT	43 13.7	27 17.3	16 10.2
VERY IMPORTANT	79 25.2	34 21.8	45 28.7
QUITE IMPORTANT	56 17.9	23 14.7	33 21.0
SLIGHTLY IMPORTANT	80 25.6	41 26.3	39 24.8
NOT VERY IMPORTANT	52 16.6	28 17.9	24 15.3
DON'T KNOW	3 1.0	3 1.9	3 1.9

## RECYCLED PAPER SCOOP HPT

Table 34-1

Q.16A RATING OF SCOOP FOR BEING GOOD FOR THE ENVIRONMENT  
 BASE: TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
EXCELLENT 5	79 16.7	11 4.6	68 29.2
VERY GOOD 4	84 17.8	20 8.3	64 27.5
GOOD 3	107 22.6	49 20.4	58 24.9
FAIR 2	44 9.3	33 13.8	11 4.7
POOR 1	133 28.1	111 46.3	22 9.4
DON'T KNOW/NOT STATED	26 5.5	16 6.7	10 4.3
MEAN	2.85	2.05	3.65
STANDARD DEVIATION	1.470	1.229	1.235
STANDARD ERROR	.070	.082	.083

RECYCLED PAPER SCOOP HPT

Table 35-1

Q.168 REASON(S) FOR RATING GIVEN  
 BASE: TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
SCOOP NOT RECYCLABLE	31 6.6	25 10.4	6 2.6
NOT BIODEGRADABLE	75 15.9	69 28.8	6 2.6
NOT GOOD FOR THE ENVIRONMENT	62 13.1	49 20.4	13 5.6
MADE OF PLASTIC	59 12.5	56 23.3	3 1.3
CONTAINS DYES	2 .4	1 .4	1 .4
GOOD FOR ENVIRONMENT BUT NOT VERY DURABLE	9 1.9	3 1.3	6 2.6
OTHER NEGATIVE MENTIONS	3 .6	2 .8	1 .4
WAS PLASTIC/BEEEN PLASTIC FOR YEARS	2 .4	1 .4	1 .4
OTHER NEUTRAL MENTIONS	4 .8	4 1.7	-
MADE OF RECYCLABLE PAPER/PLASTIC	38 8.0	3 1.3	35 15.0
BIODEGRADABLE	145 30.7	26 10.8	119 51.1
BREAKS DOWN FASTER IN DUMP	19 4.0	1 .4	18 7.7
NO TOXIC WASTE	1 .2	-	1 .4
CAN BE BURNED IN FIREPLACE	1 .2	-	1 .4

Continued



## RECYCLED PAPER SCOOP HPT

Table 35-1

Q.16B REASON(S) FOR RATING GIVEN  
 BASE:TOTAL INTERVIEWS

	TOTAL -----	PLASTIC SCOOP -----	PAPER SCOOP -----
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
SCOOP DURABLE ENOUGH TO BE REUSED	25 5.3	18 7.5	7 3.0
ENVIRONMENTALLY CONSIDERATE	4 .8	3 1.3	1 .4
EASY TO THROW AWAY	2 .4	1 .4	1 .4
OTHER POSITIVE MENTIONS	20 4.2	8 3.3	12 5.2
DON'T KNOW/NOT STATED	47 9.9	28 11.7	19 8.2

RECYCLED PAPER SCOOP HPT

Table 35-2

Q.168 REASON(S) FOR RATING GIVEN  
 BASE: TOTAL INTERVIEWS  
 BY RATING OF SCOOP

	TOTAL					PLASTIC SCOOP					PAPER SCOOP												
	EXC. V GOOD	GOOD	FAIR	POOR	DK/NS	EXC. V GOOD	GOOD	FAIR	POOR	DK/NS	EXC. V GOOD	GOOD	FAIR	POOR	DK/NS								
TOTAL INTERVIEWS	79	84	107	44	133	26	100.0	100.0	100.0	100.0	11	20	49	33	111	16	68	64	58	11	22	10	
SCOOP NOT RECYCLABLE	-	1	2	5	21	2	1.2	1.9	11.4	15.8	7.7	-	1	2	4	16	-	-	-	1	5	-	
NOT BIODEGRADABLE	-	-	3	18	52	2	2.8	40.9	39.1	7.7	-	-	2	16	49	2	-	-	1	2	3	-	
NOT GOOD FOR THE ENVIRONMENT	-	1	7	8	46	-	1.2	6.5	18.2	34.6	-	-	1	4	7	37	-	-	3	1	9	-	
MADE OF PLASTIC	-	2	4	14	37	2	2.4	3.7	31.8	27.8	7.7	-	2	14	36	2	-	-	2	-	1	-	
CONTAINS DYES	-	-	1	-	1	-	.9	-	-	.8	-	-	-	-	1	-	-	-	1	-	-	-	
GOOD FOR ENVIRONMENT BUT NOT VERY DURABLE	2	1	2	1	3	-	2.5	1.2	1.9	2.3	2.3	-	-	-	3	-	2	2.9	1.6	3.4	9.1	-	
OTHER NEGATIVE MENTIONS	-	-	1	-	2	-	.9	-	-	1.5	-	-	-	-	2	-	-	-	-	1	-	-	
WAS PLASTIC/BEEN PLASTIC FOR YEARS	1	-	1	-	-	-	1.3	.9	-	-	-	-	1	-	-	-	1	1.5	-	-	-	-	
OTHER NEUTRAL MENTIONS	-	-	3	1	-	-	2.8	2.3	-	-	-	-	3	1	3.0	-	-	-	-	-	-	-	
MADE OF RECYCLABLE PAPER/PLASTIC	13	13	11	1	-	-	16.5	15.5	10.3	2.3	9.1	-	1	1	1	-	12	13	10	-	-	-	
BIODEGRADABLE	51	49	36	5	3	1	64.6	56.3	33.6	11.4	63.6	40.0	16.3	6.1	.9	-	44	64.7	41	28	3	2	
BREAKS DOWN FASTER IN DUHP	9	6	2	2	-	-	11.4	7.1	1.9	4.5	-	5.0	-	-	-	-	9	13.2	7.8	3.4	18.2	-	
NO TOXIC WASTE	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
																							1.6

Continued

RECYCLED PAPER SCOOP HPT

Table 35-2

Q.168 REASON(S) FOR RATING GIVEN  
 BASE: TOTAL INTERVIEWS  
 BY RATING OF SCOOP

	TOTAL					PLASTIC SCOOP					PAPER SCOOP							
	EXC. V	GOOD	FAIR	POOR	DK/NS	EXC. V	GOOD	FAIR	POOR	DK/NS	EXC. V	GOOD	FAIR	POOR	DK/NS			
TOTAL INTERVIEWS	79	84	107	44	133	26	11	20	49	33	111	16	68	64	58	11	22	10
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CAN BE BURNED IN FIREPLACE	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	1.3												1.5					
SCOOP DURABLE ENOUGH TO BE REUSED	3	5	13	4	-	-	2	3	10	3	-	-	1	2	3	1	-	-
	3.8	6.0	12.1	9.1			18.2	15.0	20.4	9.1			1.5	3.1	5.2	9.1		
ENVIRONMENTALLY CONSIDERATE	-	-	4	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
			3.7						6.1					1.7				
EASY TO THROW AWAY	-	1	1	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
		1.2	.9						2.0					1.6				
OTHER POSITIVE MENTIONS	5	7	7	-	1	-	-	5	3	-	-	-	5	2	4	-	1	-
	6.3	8.3	6.5	.8				25.0	6.1				7.4	3.1	6.9	4.5		
DON'T KNOW/NOT STATED	1	4	18	2	2	20	1	3	12	1	-	11	-	1	6	1	2	9
	1.3	4.8	16.8	4.5	1.5	76.9	9.1	15.0	24.5	3.0	68.8			1.6	10.3	9.1	9.1	90.0

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RECYCLED PAPER SCOOP HPT

Table 39-1

Q.20 HOUSEHOLD INCOME  
BASE:TOTAL INTERVIEWS

	TOTAL .....	PLASTIC SCOOP .....	PAPER SCOOP .....
TOTAL INTERVIEWS	473 100.0	240 100.0	233 100.0
UNDER \$20,000	31 6.6	10 4.2	21 9.0
\$20,000 - \$29,000	66 14.0	32 13.3	34 14.6
\$30,000 - \$39,000	98 20.7	49 20.4	49 21.0
\$40,000 OR MORE	196 41.4	106 44.2	90 38.6
DON'T KNOW/NOT STATED	82 17.3	43 17.9	39 16.7



## **Appendix D**

**Appendix D**  
**BIBLIOGRAPHY**

1. ASTM, **Selected ASTM Standards on Packaging**, ASTM, Philadelphia, 1991.
2. Anon., **Glossary of Packaging Terms**, The Packaging Institute International, Stamford, CT. 1987.
3. Bakker, Marilyn, **The Wiley Encyclopedia of Packaging Technology**, John Wiley & Sons, New York, 1986.
4. Chrisnall, Peter M., **Marketing Research: Analysis and Measurement**, McGraw-Hill, New York, 1973.
5. Churchill, Gilbert A., **Market Research: Methodological Foundations**, The Dryden, Illinois, 1976.
6. Green, P.E., and R.E. Frank, **A Manager's Guide to Marketing Research, Survey of Recent Developments**, Wiley, New York, NY, 1967.
7. Hanlon, J.F., **Handbook of Package Engineering**, McGraw-Hill Book Co., New York, NY, 1984.
8. Harckham, Arthur, W., **Packaging Strategy**, Technomic, Lancaster, 1989.
9. Kner, A., **Paperboard Packaging**, 53, No.10, October, 1968.
10. Kelsey, Robert J., **Packaging in Today's Society**, 3<sup>rd</sup> Edition, Technomic, Pennsylvania, 1989.
11. Palmer, Joy., **Recycling Paper**, Franklin Watts, New York, 1991.
12. Palmer, Joy., **Recycling Plastic**, Franklin Watts, New York, 1991.
13. Pope, Jeffrey L., **Practical Marketing Research**, AMACOM, New York, 1981.

14. Qasim, S.H. **SI Units in Engineering and Technology**, Pergamon Press, U.K., 1977.
15. Stern, Walter, **Handbook of Package Design Research**, John Wiley & Sons, New York, 1991.
16. Stern, Walter, **The Package Engineering Handbook**, Board Products Publishing Co., Chicago, 1954.
17. Snedecor, George W. **Statistical Methods**, The Iowa State University Press, Iowa, 1964
18. Stone, Sagar A.D., and N.A. Ashford. **Recycling the Plastic Package**, Technology Review, July 1992
19. Worcester & Downham. **Consumer Market Research Handbook**, Van Nostrand Reinhold Co., England, 1979
20. Zaltman, G., and P.C. Burger, **Marketing Research: Fundamentals and Dynamics**, The Dryden Press, Hinsdale, IL, 1975.

## Appendix E

### GLOSSARY OF TERMS

**Base:** The number on which the percentages in a table are calculated.

**Biodegradable:** Capable of biological breakdown by micro-organisms.

**Callback:** A second attempt to interview a respondent, either because the person could not be reached on the first try or to complete an after-use interview in a product test.

**Central-location study:** A survey conducted at a conveniently located site to which respondents come to be interviewed. Sometimes used to mean any location where respondents are interviewed, such as shopping malls.

**Chipboard:** Recycled paperboard often covered with a thin layer of bleached virgin fibre and/or a clay coating which facilitates printing

**Closed-end question:** Any question with a limited number of prelisted answers.

**Demographics:** Personal or household characteristics, such as age, sex, income, or educational level.

**Dosing Device:** An apparatus for measuring the proper amount of product according to manufacturer's recommended usage so that an optimum performance is achieved.

**Fibre or Fiber:** The threadlike unit of vegetable growth that form the basic structural components of paper, or synthetic filaments used in similar sheet materials. Fibre also refers to finished products e.g., thread and paper. Wood fibres (pulp) are the most desirable source of paper and paperboard.

**Monadic:** A test in which a respondent evaluates only one product.

**Open-end question:** A question that has no prelisted answers. Example: "why do you say that?" Also called *discussion question* or *subjective question*.

**Package/packaging:** A material or item that is used to protect, contain, or transport a commodity or product. A package can also be a material or item that is physically attached to a product or its container for the purpose of marketing the product or communicating information about the product.

**Paperboard:** Distinguished from other kinds of paper by greater basis weight, thickness, and rigidity. Paperboard refers to sheets 0.012 of an inch (12 points) or more in thickness. Incorrectly termed cardboard.

**Placement interview:** An interview in which a respondent is recruited and given the product to use in a product test.

**Post-consumer material:** Material generated by industry, commercial and institutional facilities, and households which has served its intended purpose and can no longer be used. This does not include the in-plant re-utilization of materials, such as re-work, re-grind, re-pulp, scarp materials, generated within the plant and capable of being re-used within the process that generated it.

**Qualitative:** Exploratory research involving small samples group interviews.

**Quantitative:** Research done with large samples to provide quantified results.

**Recyclable:** Packages made from materials which after use can be diverted from the waste stream and recycled into a new product or package.

**Recycled content:** The portion of a package's weight that is composed of post-use material.

**Recycling:** A process through which post-use materials are collected and processed for transformation into new products.

**Reuse:** The direct reapplication of a package, for the same or different purpose in its original form.

**Single Product Identified Test:** An in-home use testing of an identified single product which has already been in the market.

**Source reduction:** The elimination of packaging or reduction of the weight, volume or toxicity of packaging.

**Topline:** Preliminary results from a project, usually showing responses of the total sample to a few key questions.

**Waste:** Any material, product or by-product for which the generator has no further use and which is discarded for management at waste disposal facilities.



## 7 / LIST OF REFERENCES

ANSI/ASQC Z1.4-1981, Sampling Procedures and Tables for Inspection By Attributes, American National Standard Sampling Procedures and tables for Inspection By Attributes, (Wisconsin, 1981)

ASTM D 528-87, Standard Test Method for Machine Direction of Paper and Paperboard, Annual Book of ASTM Standards, (ASTM, Philadelphia, 1991)

Environment Canada, National Packaging Protocol (NAPP), Waste Mangement, (Ottawa, March 1990)

Leonard, E.A., Packaging Specifications, Purchasing, and Quality Control, (Third Edition, Marcel Dekker, Inc., New York, NY, 1987), 153-163..

Miyares, B., Recycling reduces, but is that enough?, Food & Drug Packaging, (November 1992), 34..

Opatow, L., Marketing Research as a Strategy Tool, Packaging Strategy Meeting the Challenge of Changing Times, (Technomic Publishing Co., Inc., Lancaster, Pennsylvania, 1989), 57-66.

P&G Canada, Consumer Marketing Research, (Toronto, 1991)

Stern, W., Handbook of Package Design Research, (John Wiley & Sons, New York, NY., 1991)

Stone, R.F., A.D. Sugar, N.A. Ashford, Recycling the Plastic package, Technology Review, (July 1992), 50-55

TAPPI T 208 om-89, Moisture in wood, pulp, paper, and paperboard by toluene distillation, Annual Book of ASTM Standards, (ASTM, Philadelphia, 1991)

TAPPI T 410 om-88, Grammage of paper and paperboard (weight per unit area), Annual Book of ASTM Standards, (ASTM, Philadelphia, 1991)



TAPPI T411 om-89, Thickness (caliper) of paper, paperboard, and combined board, Annual Book of ASTM Standards, (ASTM, Philadelphia, 1991)

TAPPI T 414 om-88, Internal tearing resistance of paper (Elmendorf-type method), Annual Book of ASTM Standards, (ASTM, 1991)