

# Optima<sup>®</sup>

Advanced Product Testing and Optimization





# Is your PRODUCT as good as it can be?

Can it command a premium price?

Can it withstand competitive attacks?

Decision Analyst's exclusive product testing system, Optima<sup>®</sup>, can answer these questions. And with our Pii<sup>®</sup> mathematical model, it is possible to identify specific product attributes that, if modified, will lead to improved product performance and enhanced consumer acceptance.

## Why Test Your Products?

Achieving clear-cut product superiority in a category is the surest way to build brand share and boost profitability. Better products can command higher prices and are more responsive to advertising investments.

## Product Testing Applications

Product testing can help you...

- Achieve product superiority over competitive products.
- Monitor the potential threat posed by competitive products.
- Cost-reduce product formulations and/or processing methods.
- Measure the effects of aging on products (shelf-life studies).
- Monitor product quality from different factories.
- Predict consumer acceptance of new products.



- Determine the optimal set of ingredients or features, given a price point, profit goal, market share target, or other objective.

## Product Testing Guidelines

Consumer tastes and preferences evolve over time.

The consumer's palate is a moving target. That's why product testing should be repeated at regular intervals. Products should be tested using a standardized monadic system, so that each product is tested in exactly the same way. This allows results to be compared across tests and over time.

"Real environment" testing (i.e., testing a product how and where it is typically used) is almost always the most accurate method of monadic product evaluation. For example, it is generally best to let consumers evaluate food products by using them in their homes, rather than tasting them in a laboratory or test kitchen.

## Some CPG Products We Have Tested

- Baby products
- Beer
- Body wash
- Breads
- Candies
- Canned goods
- Cheese
- Chili
- Coffee
- Deodorant
- Desserts
- Detergents
- Facial cleansers
- Feminine products
- Frozen foods
- Fruit juices
- Hair care products
- Jellies
- Ketchup
- Makeup
- OTC medications
- Processed meats
- Refrigerated food products
- Salad dressings
- Salsa
- Snack foods
- Soaps
- Soups
- Toothpaste
- Wine

## Optima® Product Testing

Typically, a representative sample of category users (150 to 200 households) is given a test product to use in-home for a few days. Then these consumers are asked a series of questions about the product, including:

- Overall rating
- Likes
- Dislikes
- Diagnostic attribute ratings
- Components evaluation
- Purchase interest
- Pricing

Based on normative data, internal diagnostics, and the Pii® mathematical model, these questions tell

us whether the product is optimal or not and indicate what needs to be changed to improve the product.

### Pii® Analysis

| Diagnostic Variable | Pii® Score | Indicated Action       |
|---------------------|------------|------------------------|
| Too sweet           | 18.65      | Reduce sweetness       |
| Too dark in color   | 14.72      | Make product lighter   |
| Too soft            | 12.95      | Make product firmer    |
| Not enough salt     | 9.48       | Add some salt          |
| Not enough crunch   | 5.23       | Make product crunchier |

## Types Of Product Testing

Decision Analyst generally favors monadic testing of products (i.e., each consumer evaluates only one product), but we also design and execute paired-comparison, sequential-monadic, and protomonadic tests. Sensory research is conducted to support client product development efforts; qualitative research is used to explore product refinement alternatives; Decision Analyst provides statistical consulting services to R&D scientists; and we conduct central-location product tests for optimization purposes.

## Optimization Methods

In addition to Pii® analyses, Response Surface and Choice Modeling analyses are the primary optimization techniques. Experimental designs and

simulation models are employed to optimize products. By testing chosen subsets of product possibilities, Response Surface and Choice Modeling can simulate and predict consumer preferences for hundreds of product possibilities, as defined by variations in ingredients, features, elements, or packages. The resulting equations are used to build an Optimization Simulator so that “what if” products can be fully explored and understood. The goal of optimization can vary. It might be maximizing consumer preference, or maximizing the profit margin without losing market share, or maximizing sales potential. The Simulator also helps demonstrate “cause and effect,” as inputs are changed and outcomes vary.



## Some Non-CPG Products Tested

The concepts, methods, and techniques of product testing can be adapted and applied to almost any product category. We have evaluated:

- Airliner seats
- Calculators
- Cellular phones
- Comforters
- Computers
- Educational toys
- Film & film processing
- Food service products
- Frying pans
- Game prototypes
- Gaming devices
- Glass windows
- Hotel rooms
- Microwave ovens
- Pagers
- PDAs
- Restaurant entrees
- Restaurant exteriors
- Restaurant interiors
- Restaurant side dishes
- Retail store layouts
- Software
- Washing machines
- Websites

## Product Quality Monitoring Systems

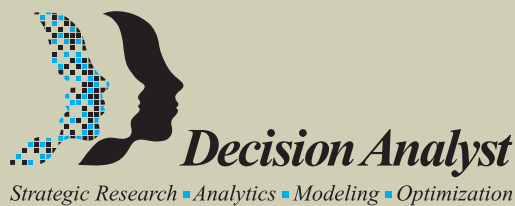
A product test reveals a product's performance at a point in time, but products are flowing from factories to warehouses to retailers all the time. Decision Analyst designs and implements on-package or on-product monitoring systems, so that consumers can rate products on a continuous basis.



Quality-control statistical systems are used to create alerts when a product's scores deviate from its product-quality target range.

## Why Decision Analyst?

Decision Analyst is a recognized leader in consumer product testing and optimization. Its staff has evaluated more than 1,000 foods, beverages, and other products during the past 32 years. Decision Analyst maintains Internet taste-testing panels with over eight million consumers around the world. The firm has over 50 staff members with extensive experience in the conduct and analysis of product tests and optimization studies. The company is a leader in the development of analytical techniques to enhance product testing and optimization.



604 Avenue H East  
Arlington, Texas 76011-3100  
817.640.6166 1.800.ANALYSIS  
[www.decisionanalyst.com](http://www.decisionanalyst.com)