

Obtaining and Using Industry Data

Jenny Chin
Best Foods, CPC International
Union, New Jersey

Best Foods Nutrition Policy

Best Foods recognizes its obligation to provide nutrition information about its food products to the consumer and health professional. Best Foods has provided nutrition information on its products since 1973 when nutrition labeling became voluntary. Skippy peanut butter and Karo syrup were the first products to voluntarily bear such label information. Since then it has been Best Foods policy to include basic nutritional data on all products unless the size of the package makes it physically impossible, for example our Golden Griddle syrups, or if the product is not a significant source of nutrients; for example our Argo and Kingsfords corn starch. Nevertheless, detailed information for all Best Foods products is available upon request.

Generation of Data

Nutrient data for our products are generated in several ways. The data may be calculated from the product formula and ingredient information or the product and ingredients may be chemically analyzed for key nutrients.

For new products, where there are limited data available, it may be necessary to calculate a theoretical nutrient profile using the formula and ingredient information. Ingredient information may be obtained from a variety of sources: such as standard food composition references like the USDA's Handbook 8 and its revised editions, Bowes and Church's **Food Values of Portions Commonly Used** and McCance and Widdowson's **Composition of Foods**. Other sources of ingredient information are obtained by analyzing individual ingredients in our analytical testing laboratories or using outside contract labs to handle analyses that we don't routinely perform. Ingredient information is also obtained from the vendors of the individual

ingredients. The information supplied by a vendor is usually submitted in the form of specification sheets. Although the information is useful, many times it is incomplete making it necessary to contact the vendor for any missing data. This can be extremely time consuming and frustrating. The moisture, cholesterol or sodium contents of an ingredient are examples of nutritional components that are rarely provided.

Each time the nutrient profile of a new ingredient is compiled, the data are entered and stored in our computerized nutrient database system: The Best Foods Nutrient Data Base System. Once the nutrient composition of all ingredients in the product is in the database, the nutrient profile of the product can be calculated. The method used by our computerized nutrient database system is the summing method. For instance, if the sodium content of each ingredient in a product is known as well as the percent contribution that each ingredient provides to the product, by summing or adding the sodium contents of each ingredient, the total amount of sodium in the product can be determined. Our nutrient data base system can calculate and report up to 72 different nutritional components in a product or recipe.

To substantiate the theoretical values and to develop a database for a new product, data are generated by chemically analyzing samples which are produced in the laboratory, at the pilot plant or production plant level. At least 6 individual samples are analyzed for proximate composition, that is moisture, protein, fat and ash; the carbohydrate content is determined by difference. Sodium, cholesterol, vitamins and minerals are also analyzed if present at a significant level. The analytical procedures used are those of the Association of Official Analytical Chemists (AOAC) or equivalent methods. The analytical data generated are reviewed by our Statistics Department to determine the

mean and standard deviation of each nutrient as well as the values which would be representative of the product. The natural variation in ingredients, the difference in precision between analytical methods, as well as variation which may be introduced by different production plants is taken into consideration.

Once a product is established and manufactured on a regular basis, a sampling plan is developed as part of the Best Foods Nutrient Assay Control Program. The Best Foods Nutrient Assay Control Program was developed to ensure that all values that are declared on our product labels are in compliance with FDA guidelines. Each product has its own sampling plan and is analyzed for key nutrients on a regular basis. For example, each month, four samples of each type of Skippy peanut butter are collected from every production plant. The four samples are composited and then analyzed for protein, moisture, total fat, fatty acid composition, niacin and sodium. Pasta products are analyzed for proximate composition as well as vitamins and minerals. Our dressing products are analyzed for total fat, fatty acid composition, sodium and cholesterol. Well over six thousand different analyses are run on our products each year to monitor compliance with the nutrition labels. These analyses are in addition to any tests run by our Quality Control Department.

Use of Data

The data generated for our products are used in a variety of ways. The primary uses are: 1) to develop nutrition information for our product labels, 2) ensure compliance with label values, 3) develop our product nutritional data sheets, 4) develop menus and recipes showing how to use our products, and 5) provide data to the United States Department of Agriculture's National Nutrient Data Bank.

First, the data that are generated for our product labels must be declared following rounding and format rules outlined in the Food and Drug Administration's Code of Federal Regulations section 101.9, titled: The nutrition labeling of foods.

The calorie content of a product is declared to the nearest 2 Calorie increment up to 20 Calories, to the nearest 5 Calorie increment from 20 to 50 Calories, and to the nearest 10 Calorie increment if there are more than 50 Calories per serving. The protein, carbohydrate and fat contents are declared to the nearest gram; Cholesterol is declared to the nearest 5 mg increment if there is more than 2 milligrams per serving; if there is less than 2, then 0 is declared.

Sodium is declared to the nearest 5 mg increment from 5 up to 140 milligrams per serving, and to the

nearest 10 mg increment above 140 milligrams per serving; if there is less than 5 milligrams, 0 is declared. Second, the data generated in our Nutrient Assay Control Program are used to ensure compliance with label values. Third, data are also used to prepare and update our product nutritional data sheets which are comprised of the Nutrition Information Per Serving (Table 1) and the Approximate Composition (Table 2) data sheets. The Nutrition Information Per Serving data sheet contains the information just described, that is, values that are rounded according to FDA's regulations. This is the information found on our product labels. The Approximate Composition data sheet expresses the absolute (i.e. not rounded) nutrient values per 100 grams of the product, as well as the amount in common household units of measure. Data for components not listed on the nutrition panel such as moisture and ash content are listed on the Approximate Composition data sheet.

Fourth, the product nutrient data are used in the development of recipes for consumer and health professional materials. These are two examples of recipe booklets where the nutrient profile of each recipe is provided. And finally, data generated by our Nutrient Assay Control Program for our dressings, oils, margarines and peanut butter products are sent periodically to the United States Department of Agriculture's National Nutrient Data Bank.

This is just a brief overview of our program describing how nutrient composition data for our food products are generated, and how that information is used. We recognize that it is a valuable tool used to assess dietary intakes in the health care and academic areas. We will continue to generate and provide this information and welcome any suggestions you may have on how we can continue to meet your needs.

TABLE 1

**NUTRITION LABELING REPORT:
MAZOLA MARGARINE**
Nutrition Information Per Serving

Serving size: 1 tablespoon (14 grams)	
Servings per container (pound): 32	
Calories	100
Carbohydrate	0 grams
Fat	11 grams
Percent of calories from fat*	99%
Polyunsaturated*	4 grams
Saturated*	2 grams
Cholesterol*	0 milligrams (0 mg/100 g)
Sodium	100 milligrams

Percentage of U.S. Recommended Daily Allowances
(U.S. RDA)

Vitamin A	10
Vitamin D	15

Contains less than 2 percent of the U.S. RDA of protein, vitamin C, thiamine, riboflavin, niacin, calcium, iron.

TABLE 2

APPROXIMATE COMPOSITION REPORT: MAZOLA MARGARINE

<u>Component</u>	<u>In 100 Grams</u>	<u>In Tablespoon</u>	<u>In 1 Cup</u>
Weight (grams)	100.0	14.0	229.0
Moisture (grams)	15.9	2.2	36.4
Protein (N x 6.25) (grams)	0.2	None	0.5
Fat, total (grams)	80.7	11.3	184.8
Triglycerides (grams)	79.5	11.1	182.1
Polyunsaturates, total (grams)	28.6	4.0	65.5
Cis, Cis only (grams)*	26.7	3.7	61.1
Monounsaturates (grams)	37.2	5.2	85.2
Saturates, total (grams)*	13.7	1.9	31.4
C12:0 to C18:0 (grams)*	13.7	1.9	31.4
P/S value	2.1	2.1	2.1
Unsaponifiable matter (grams)	1.2	0.2	2.7
Cholesterol (milligrams)	None	None	None
Phytosterols (milligrams)	500	70	1145
Tocopherols (milligrams)	56	8	128
Carbohydrate, available (grams)	1.3	0.2	2.9
Ash (grams)	1.9	0.3	4.4
Sodium (milligrams)	710	100	1625
Vitamin A (International Units)	3570	500	8180
Vitamin D (International Units)	430	60	980
Energy (Calories)		720	1001650