

**Industry Response to Labeling Initiatives:  
Impact on Industry Activities**

## **Nutrient Databases for the 90's**

**Katy Raneri, M.S., R.D.  
Kraft General Foods  
Tarrytown, New York**

### **I. Overview/History**

The GF USA Nutrient Database has been in existence since the early 1970s, developed primarily for use in nutrition labeling. It has undergone numerous transformations over the years, earning the name NUTRIFILE in 1983.

NUTRIFILE's major functions include the support of:

- \* Nutrition label claims, including substantiating nutrition and health claims
- \* Product development, by enabling product developers to design products around specific nutrient criteria
- \* Recipe and special diet system development

NUTRIFILE carries out these tasks by:

1. Calculating the nutrient profiles of product formulas, recipes and raw materials.
2. Storing and summarizing analytical data.
3. Performing adjusted analytical analyses - calculation of the theoretical impact of a change in product formulation using previously obtained analytical data.
4. Generation of a variety of reports - compositional, comparison, audit, etc.
5. Analyzing dietary intakes - calculates and stores the nutrient profiles of a diet record using age/sex appropriate RDAs.

NUTRIFILE currently contains nutrient profiles for over 15,000 food items, including GF products, ingredients and generic foods. 35 nutrients are stored for

each food item, with the capacity to store up to 95 nutrients.

### **II. Meeting Greater Business Needs**

The diversity, complexity and everchanging nature of our business, coupled with rapidly expanding computer technology, made it necessary to re-evaluate and ultimately restructure our system. We are currently redesigning and enhancing our database. The new system is pc-based and operates on a Local Area Network. The objectives of our enhanced database include:

- \* Increased functionality to address current and anticipated business needs and requirements.
- \* Improved productivity by significantly reducing annual operating costs.
- \* Flexibility for growth.

In addition, all these objectives must be met while continuing to meet on-going business needs.

### **III. Challenges of a Sophisticated Nutrient Database**

We believe we have a state-of-the-art nutrient database and the challenges of a sophisticated system are many. Along with all the technical and business requirements necessary to achieve a state-of-the-art system, there is the external environmental challenge as presented in the 1990 Food Labeling Reform. Some of the challenges which we, as well as many of you, are currently facing include:

**\* Nutrients/Data**

- what nutrients will become mandatory and how will they be defined?
- availability of data - there isn't sufficient fiber or complex carbohydrate data
- nutrient units (i.e. RE vs IU for vitamin A)
- format - certainly any format changes will impact how the nutrients are presented

**\* Advances in Food Technology**

Although having analytical data for a food product is more appropriate in certain situations (unique new product development, new or novel ingredients/processes, extensive/unfamiliar processing, multiple components) we can certainly learn a great deal about mirroring these processing changes by also performing calculations and comparing the results. Gone are the days when a product portfolio consists of only 'simple' ingredients of fairly constant composition, manufactured by mixing in the absence of thermal processing.

**\* Advances in Computer Technology**

- The exponential growth in the power of the pc
- Graphical interfaces give a quite different look and feel to our system
- Advances in computer technology are occurring every day and we have to realize that quite likely our final system will be somewhat outdated by the time we complete the project.

**\* Expertise of User**

- New and novel processing
- Advances in computer technology
- Advances in nutrition
- Regulatory environment

All of the above are a challenge individually. When you consider all of them together, the challenge increases considerably. The importance of user training, knowledge and expertise cannot be overstated. A database is only as good as the user.