

## Key Foods: Setting Priorities for Nutrient Analyses

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The Nutrient Data Laboratory is responsible for developing authoritative nutrient data bases that contain a wide range of food composition values for the United States' food supply. This requires, in addition to other activities, updating and revising the USDA Nutrient Data Base for Standard Reference, the electronic counterpart to Agriculture Handbook No. 8, and supplying nutrient values for the Nationwide Food Surveys. However, with more than 5,200 food items in the data base and a complete nutrient profile costing approximately \$2,000 for one sample, the analysis of every food item for every nutrient to meet user requirements is impossible. Consequently, priorities for analyzing foods and nutrients must be determined. Procedures using food consumption data and nutrient values for developing the Key Foods list are explained. Key Foods have been identified as those food components that contribute up to 80% of any one nutrient. When total nutrient contributions from these 527 Key Foods are aggregated, they account for approximately 90% of the nutrient content of the U.S. diet for the 30 nutrients examined. These Key Foods will form the core of the USDA future nutrient analyses contracts. The list of Key Foods as major food contributors of various nutrients is presented. © 1996 Academic Press, Inc.

The major activity of the Agricultural Research Services (ARS) Nutrient Data Laboratory is the development of authoritative nutrient data bases which contain values for a wide range of nutrients or food components. The major product is the USDA Nutrient Data Base for Standard Reference, the electronic version of Agriculture Handbook No. 8, Composition of Foods—Raw, Processed, and Prepared. With the increasing diversity of the United States' food supply, acquiring and evaluating data for updates to the Standard Reference constitutes a major portion of the laboratory's efforts. In addition, USDA's Nationwide Food Surveys and the National Health and Nutrition Examination Survey (NHANES) conducted by the U.S. Department of Health and Human Services depend on these data. The Standard Reference Data Base contains nutrient values for more than 5,200 food items and the Survey Nutrient Data Base contains more than 6,600 food items. A complete nutrient profile costs approximately \$2,000 for one sample. Therefore, analyzing every food item for every nutrient and meeting user requirements for the data is impossible. Some data can be obtained in cooperation with the food industry. However, analyses to obtain data and

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to verify data received from other sources are still necessary. Therefore, priorities for analyzing foods and nutrients must be established.

The Nutrient Data Laboratory has developed a procedure to identify Key Foods, i.e., those foods which together provide approximately 80% of the intakes of a nutrient for the population. A Key Foods list was first employed by the Nutrient Data Laboratory in the mid 1980s (Hepburn, 1987) using data from the 1985–86 Continuing Survey of Food Intakes by Individuals (CSFII) and the 1987–88 Nationwide Food Consumption Survey. The foods in this list with imputed/calculated nutrient values were targeted for nutrient analyses by the Nutrient Data Laboratory in the late 1980s and early 1990s. Other researchers have also developed similar lists based on food consumption data from these surveys and new nutrient databases in targeting foods to be analyzed for selenium (Schubert *et al.*, 1987), copper (Lurie *et al.*, 1989), and carotenoids (Chug-Ahuja *et al.*, 1993). Block *et al.* (1985) described a process of determining important nutrient sources in the U.S. diet where food intake data were compiled from NHANES II (1976–80) and weighted for the U.S. population, ages 6 months to 74 years. Foods were ranked according to their contribution to the intake of 10 selected nutrient intakes and generalized lists of the top 50 foods for each nutrient were prepared. These nutrient-specific food items contributed 90–95% of each of the total nutrient intake.

The procedure described herein goes one step further than those previously described by disaggregating many complex multicomponent foods to their commodity level ingredients. This permits a more accurate assessment of the nutrient contributions of these components, such that priorities for nutrient analyses can be more clearly established. Other systems would assign a food item to the food group based on a food major component. For example, a hamburger sandwich might be assigned to the meat group. Therefore, the roll, any vegetables such as lettuce or tomato, and condiments would also be attributed to that group. By breaking down the constituents of multicomponent foods, they are attributed to the appropriate food group. Using this method with this hamburger sandwich, the hamburger patty is assigned to the meat group, the lettuce and tomato are assigned to the vegetable group, the roll is assigned to the baked products group, and so on.

## PROCEDURE

The “USDA Nutrient Data Base for Individual Food Intake Surveys” (USDA, 1994) was developed by the Nutrient Data Laboratory and the ARS Food Surveys Research Group to provide nutrient values on all foods reported by survey respondents. Three data files are used to create this data base: (1) the recipe file contains a list of food items and their amounts, yields, and codes referencing retention factors; (2) the Primary Nutrient Data Set contains nutrient values on food items used in the recipe file; and (3) a file containing retention factors for a variety of cooking and preparation methods. A computer program calculates the nutrient values using information from the three files. To develop the Key Foods list it is necessary to calculate the consumption of each item in the Primary Nutrient Data Set. This is done by taking information from the USDA Nutrient Data Base for Individual Food Intake Surveys and Food Consumption Data (USDA-HNIS, 1994), and in essence, reversing the procedure used to develop the nutrient database (Fig. 1).

The list of ingredients and their amounts for all recipes contained in the “Recipe

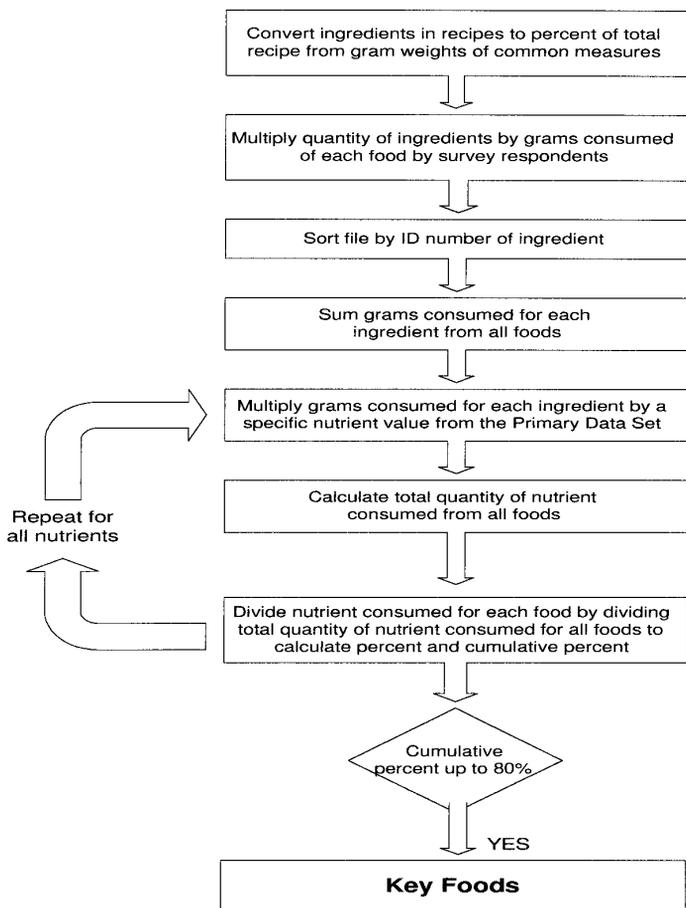


FIG. 1. Overview of procedure for developing Key Foods list.

File for the USDA Nutrient Data Base for Individual Food Intake Surveys'' (USDA, 1994) are used in the first step to determine the Key Foods list. The recipe file contains the food name, list of ingredients, and amounts needed to develop a representative value for the food item. Development of the recipe file was described previously (Perloff, 1985). Recipes can be either a single item, such as a raw fruit or vegetable, or complex multiingredient foods, such as a casserole or an ethnic dish. Multiingredient recipes are broken down into their individual ingredients. In the recipe file, ingredient amounts can be expressed in common household units. However, for these calculations all ingredient amounts were first converted to the percentage of the total recipe for each food (Table 1).

The amount of each ingredient consumed by the survey group, weighted to represent the population of the United States, is calculated by multiplying the percentage contribution of each ingredient in each food by the amount of each food consumed. This step is repeated for all foods in the recipe file. For example, 'milk, not further specified'' is not actually available in the market, but is a composite food comprising

TABLE 1

EXAMPLE OF TWO RECIPES WITH AMOUNT OF INGREDIENTS CONVERTED TO PERCENTAGE OF TOTAL FOOD AND SHOWING CALCULATION OF AMOUNT CONSUMED FOR EACH INGREDIENT

Food	Amount of Food Consumed <sup>1</sup> (g) X 10 <sup>6</sup>	Ingredient	Amount of Ingredient in percent	Amount of Ingredient Consumed per food (g) x 10 <sup>6</sup>
1110000 Milk, Not Further Specified (NFS)	3.499	01077 Milk, Whole, 3.3% Fat	38.9	1.361
		01079 Milk, Lowfat, 2% Fat	39.7	1.389
		01082 Milk, Lowfat, 1% Fat	9.7	0.339
		01085 Milk, Skim	11.7	0.409
5814511 Macaroni and Cheese	8.390	20100 Macaroni, cooked	39.1	3.280
		04132 Margarine	3.0	0.252
		20081 Flour	1.7	0.143
		89630 Salt	0.2	0.017
		01077 Milk	35.1	2.945
		01042 Cheese	16.3	1.367
		74750 Bread crumbs, dry	3.6	0.302
04132 Margarine	1.0	0.084		

<sup>1</sup> Amount consumed by U.S. population reported in CSF11 1989–91.

several different types of milk. It is used when a survey respondent does not know exactly which type of milk he or she is drinking. By splitting this item into its component parts we see that the consumption of “milk, not further specified” is apportioned as follows:  $1.36 \times 10^6$  g to whole milk;  $1.39 \times 10^6$  g to 2% fat milk;  $0.34 \times 10^6$  g to 1% fat milk; and  $0.41 \times 10^6$  g to skim milk (Table 1). The amount of whole milk used as an ingredient in all recipes in the database is summed (Table 2) to decide the total amount consumed for whole milk. For example, summing the whole milk used in all foods as an ingredient, and the whole milk consumed directly, gives a total of  $78.48 \times 10^6$  g consumed. This value is then multiplied by the quantity of each nutrient in whole milk to yield the grams consumed of each nutrient in whole

TABLE 2

EXAMPLE OF SUMMING THE AMOUNT CONSUMED FOR EACH INGREDIENT

Food	Ingredient	Amount of Ingredient Consumed per Food x 10 <sup>6</sup>
1110000 Milk, NFS	01077 Milk, Whole, 3.3% Fat	1.361
•		•
•		•
5814511 Macaroni and Cheese		2.945
•		•
•		•
•		•
Sum of All Foods		78.476

TABLE 3

CALCULATION OF GRAMS OF FAT CONSUMED AND PERCENTAGES  
AND CUMULATIVE PERCENTAGES OF TOTAL INTAKES

NDB No.	Value (g/100 g)	Grams Consumed <sup>1</sup> x 10 <sup>6</sup>	Fat Consumed x 10 <sup>6</sup>	%	Cumulative %	Description <sup>2</sup>
04132	80.50	4.284	3.449	7.13	7.13	Margarine, regular, unspecified oils, 80% fat
01077	3.34	78.476	2.621	5.42	12.55	Whole milk
04031	100.00	2.003	2.003	4.14	16.69	Shortening, household
04025	79.40	1.977	1.570	3.25	19.93	Mayonnaise
01042	31.25	4.974	1.554	3.21	23.15	Cheese, processed, American
13312	20.89	6.236	1.290	2.67	25.81	Beef, ground, regular, broiled
01079	1.92	58.605	1.125	2.33	28.14	Milk, low fat, 2%
01123	10.02	10.690	1.071	2.21	30.35	Egg, whole, raw
01001	81.11	1.221	0.990	2.05	32.40	Butter, salted
19095	11.00	7.440	0.818	1.69	34.09	Ice cream, vanilla

<sup>1</sup> Amount consumed by U.S. population reported in CSFII 1989–91.

<sup>2</sup> The names appearing in this list have been changed from those in the source database to reflect common usage. For the complete description, see the source database using the same ID number.

milk. Using fat as an example (Table 3), the  $78.48 \times 10^6$  g consumed of whole milk is multiplied by the fat content (3.34 g/100 g) of whole milk to give  $2.62 \times 10^6$  g of fat consumed from whole milk. This process is repeated for all foods used as ingredients in the recipe file. The total fat contribution from all foods is determined. Dividing this figure by the grams of fat consumed for whole milk shows that 5.4% of the grams of fat consumed comes from whole milk. These values are then sorted in descending order. The percentage nutrient contribution of each ingredient is then calculated and a running cumulative total is determined. Those foods contributing up to a cumulative total of 80% were included in the Key Foods list.

The Second Scientific Report on Nutrition Monitoring (LSRO, 1989) identified 14 nutrients (Table 4) of public health issue or potential public health issue. Those foods contributing to a cumulative total of 80% for the 14 nutrients were combined and duplicate food items were removed; a list of 463 food items was the result (Appendix 1). A food by nutrient matrix for the Key Foods is also shown. This compares with the 5,248 foods in the USDA Nutrient Database for Standard Reference, almost 6,700 foods in the USDA Nutrient Data Base for Individual Food Intake Surveys, and approximately 3,300 items in the Primary Data Set.

While this approach has identified 463 Key Foods, further refinement is needed to insure that we have a representative list of what Americans eat. Since this approach involves breaking down food mixtures into their component parts, few food mixtures are included. As a result some variations seen in food mixtures served in different settings such as restaurants, schools, and other food service locations are underrepresented. To address this issue, we have reviewed other sources of consumption data, such as sales volume data, trade association reports, studies and reports from other government agencies, and data on mixed dishes from USDA's Nationwide Food

TABLE 4  
NUTRIENTS OF CURRENT OR POTENTIAL PUBLIC  
HEALTH ISSUE

Current	Potential
Food energy	Dietary fiber
Fat	Vitamin A
Saturated fat	Carotenes
Cholesterol	Folate <sup>1</sup>
Alcohol <sup>1</sup>	Vitamin B <sub>6</sub>
Iron	Vitamin C
Calcium	Potassium
Sodium	Zinc
	Fluoride <sup>1</sup>

<sup>1</sup> Not included in Key Food calculations due to: poor methods of analysis (folate); limited appearance in foods (alcohol); and no available data (fluoride).

Surveys. Using these sources, an additional 64 food mixtures (Appendix 2) were added to the list from items in the CSFII 1989–91.

## DISCUSSION

Of the 463 foods identified as Key Foods by this process, 123 (26%) are major contributors of only one individual nutrient (e.g., hydrogenated soybean oil to fat). Thirty-four Key Foods (7%) occur on the list for 10 or more nutrients. Whole milk appears on the list for the most (13) nutrients. Although a Key Food may have been placed on the list because it occurred on only one individual nutrient list, it does contain other nutrients. When the contributions of these other nutrients are added to the Key Food nutrient contribution, the total contribution is approximately 90% of the consumption of the nutrients examined.

A number of raw or unprepared foods such as legumes or beef, which are not commonly consumed raw, appear on the Key Foods list. These foods were used as ingredients in the recipe file to develop representative values for each food and do not indicate that the food was necessarily consumed in the form described. Also, a number of foods such as salt and baking powder, which are not usually consumed by themselves, appear on the list as they are used in many recipes. Other foods, such as white bread and toast, appear in different forms because of the way they were used in the recipe file. A number of foods, which may not be considered traditional good sources of any particular nutrient (i.e., fiber in beer), appear on this list due to high consumption by some sectors of the population. On the other hand, some foods which may be considered traditional good sources of a nutrient, may not register as Key Foods because they are not widely consumed by the entire population.

While both raw and prepared forms of some foods appear on the Key Foods list, the nutrients in the food by nutrient matrix may differ. One cause is changes in the nutrient content during processing or preparation (i.e., nutrient losses during cooking as in boiling vegetables, loss of moisture, as in toasting bread, or loss of fat during cooking meats). Another cause is differences in consumption levels—

the prepared form is more commonly consumed than the unprepared form or the reverse may be true.

In this study, weighted consumption data for the entire U.S. population were used. Subsequently, some foods consumed by members of various subpopulations may not be included. While these foods may not be important contributors to the intake of the U.S. population as a whole, they may be frequently consumed by members of a particular subpopulation.

The component list for each recipe contains those items needed to develop a representative nutrient profile for that food mixture at the time the survey was conducted. It may not contain a complete breakdown of all ingredients in the recipe to the commodity level. For example, if data were previously published in Agriculture Handbook No. 8 for a particular canned soup, that nutrient profile was used and no component list was developed. In other cases, components may be added to an existing item to develop a representative nutrient profile for a variation of that item. Again using soup as an example, a representative value for chicken noodle soup could be developed by creating a recipe containing chicken broth and noodles. Since the task was to develop representative nutrient values, there was no need to break down the components any further. For some complex, highly processed products which may be widely consumed or important source of certain nutrients, a lack of formulation information prevents breaking the food down into its constituents. In addition, this particular approach to develop a Key Foods list does not consider the impact of yield and nutrient retention due to preparation of "raw" ingredients on the nutrient content of the food items.

Because of these limitations, the calculated nutrient contribution of some foods to the total diet may be an under- or overestimation of the amount actually contributed. The application of these data for purposes other than their intended use is limited. However, we do feel that this approach provides a valuable tool to assist in determining Key Foods and setting priorities for allocating limited funds for nutrient analyses.

## CONCLUSION

As our food supply becomes more varied, it is essential to prioritize available funds for nutrient analysis. Medical and nutrition investigators conduct research aimed at identifying the role of previously obscure components for their potential in maintaining good health and in preventing certain diseases. The Key Foods list can help investigators in identifying foods for analysis to assess exposure to these newly identified components. In preparation for the 1994-96 CSFII a number of changes have been made in the recipe file, the survey codebook, and in questions asked by interviewers to improve the specificity and quality of the data received on foods consumed. As these new data become available, it will be necessary to review this list to consider changes in foods and consumption patterns. It is expected that some foods will be dropped from this list, while other foods will be added due to changes in marketing practices and consumer eating habits. Procedures have been established for periodic reviews of this list to take into consideration these changes and other new information.

## REFERENCES

- BLOCK, G., DRESSER, C. M., HARTMAN, A. M., AND CAROLL, M. D. (1985). Nutrient Sources in the American diet: Quantitative Data from the NHANES II Survey. *Am. J. Epi.* **122**(1), 13-26.

- CHUG-AHUJA, J. K., HOLDEN, J. M., FORMAN, M. R., MANGELS, A. R., BEECHER, G. R., AND LANZA, E. (1993). The development and Application of a Carotenoid Database for Fruits, Vegetables, and Selected Multicomponent Foods. *J. Am. Diet. Assoc.* **93**(3), 318–323.
- HEPBURN, F. N. (1987). Food Consumption/Food Composition Interrelationships. U.S. Department of Agriculture, Human Nutrition Information Service. Adm. Rpt. No. 382, pp. 68–74.
- LSRO (Life Sciences Research Office), Federation of American Societies for Experimental Biology. (1989). Nutrition Monitoring in the United States - An Update Report on Nutrition Monitoring. Prepared for the U.S. Department of Agriculture and the U.S. Department of Health and Human Services. DHHS Publication No. (PHS) 89-1255. Public Health Service. Washington, DC.
- LURIE, D. G., HOLDEN, J. M., SCHUBERT, A., WOLF, W. R., AND MILLER-IHLI, N. J. 1989. The Copper Content of Foods Based on a Critical Evaluation of Published Analytical Data. *J. Food Comp. Anal.* **2**, 298–316.
- PERLOFF, B. P. (1985). Recipe Calculations for NFCS Data Base. In Proceedings of Tenth National Nutrient Data Bank Conference. National Tech. Info. Service. Springfield, VA. PB86-159589. pp. 11–21.
- SCHUBERT, A., HOLDEN, J. M., AND WOLF, W. R. (1987). Selenium Content of a Core Group of Foods Based on a Critical Evaluation of Published Analytical Data. *J. Am. Diet. Assoc.* **87**(3), 285–299.
- USDA (U.S. Department of Agriculture), Human Nutrition Information Service. (1994). 1989-1991 Continuing Survey of Food Intakes by Individuals and 1989-1991 Diet and Health Knowledge Survey. Computer Tape.
- USDA (U.S. Department of Agriculture), (1994). USDA Nutrient Data Base for Individual Food Intake Surveys and Data Sets Used to Create It, Release 7. National Tech. Info. Service. Springfield, VA. PB94-504526GEI.

## APPENDIX 1

KEY FOODS BASED ON NUTRIENTS OF PUBLIC HEALTH SIGNIFICANCE; CSFII 1989–91<sup>1</sup>

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
	<b>Baby Foods</b>														
03803	Enfamil <sup>®</sup> , with iron			✓		✓									✓
03194	Rice cereal, baby food, dry					✓									
03850	Similac <sup>®</sup> , with iron	✓	✓	✓		✓	✓						✓		✓
	<b>Baked Products</b>														
18012	Biscuit dough, commercial, chilled, in cans	✓				✓		✓							
18010	Biscuit mix	✓	✓			✓	✓	✓							
18079	Breadcrumbs, dry	✓				✓	✓	✓	✓					✓	✓
42011	Breading for chicken							✓							
18080	Breadsticks					✓									
18081	Breadstuffing mix, dry	✓				✓		✓	✓						
18159	Chocolate chip cookies, commercial	✓	✓	✓		✓		✓	✓						
18363	Tortillas, corn	✓				✓	✓		✓			✓			
18022	Cornbread mix, dry	✓							✓						
18026	Cracked wheat/wheat bread, toasted	✓	✓			✓	✓	✓	✓			✓		✓	✓
18025	Cracked wheat/wheat bread	✓	✓	✓		✓	✓	✓	✓			✓		✓	✓
18244	Danish pastry	✓	✓	✓		✓									
18248	Doughnuts, cake, plain	✓	✓	✓		✓		✓							
18255	Doughnuts, raised (includes plain and glazed)	✓	✓	✓		✓			✓						✓
18364	Tortillas, flour	✓	✓			✓	✓	✓	✓					✓	✓
18030	French or Vienna bread, toasted	✓				✓									
18029	French or Vienna bread	✓	✓			✓	✓	✓	✓					✓	✓

<sup>1</sup> 5-digit numbers denote items from the Primary Nutrient Data Set. Checkmarks indicate contribution by the food to 80% of total nutrient intake. Because of the way they were added, this information could not be determined for foods with 7-digit IDs.

<sup>2</sup> The names appearing in this list have been changed from those in the source database to reflect common usage. For the complete description, see the source database using the same ID number.

<sup>3</sup> To reflect changes in marketing practices, 0" and 1/4" trim meats were combined in the survey files in appropriate proportions. The listed items were not necessarily consumed separately.

<sup>4</sup> In some cases, flesh and skin are separated to facilitate combining them in the survey files to make up various portions.

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
18173	Graham crackers, plain	✓				✓									
18353	Hard rolls	✓				✓		✓							✓
18033	Italian bread	✓				✓			✓						
18291	Pancake/waffle mix, dry	✓				✓	✓	✓	✓					✓	✓
18215	Peanut butter-cheese sandwich crackers	✓	✓			✓									
18342	Plain pan rolls	✓	✓	✓		✓	✓	✓	✓		✓			✓	✓
18060	Rye bread	✓				✓		✓	✓						
18061	Rye bread, toasted								✓						
18228	Saltines	✓	✓			✓		✓	✓						
78290	Sandwich cookies (includes chocolate and vanilla)	✓	✓	✓		✓		✓	✓						
18229	Snack-type crackers (oil-sprayed)	✓	✓			✓									
18356	Sweet rolls	✓	✓			✓	✓								
18360	Taco shells	✓							✓						
18362	Toaster pastries, fruit	✓				✓	✓				✓				
18212	Vanilla wafers	✓													
18066	Wheat bran bread										✓				
18070	White bread, toasted	✓	✓	✓		✓	✓	✓	✓		✓			✓	✓
18069	White bread	✓	✓	✓		✓	✓	✓	✓		✓			✓	✓
18076	Whole wheat bread, toasted	✓				✓			✓						✓
18075	Whole wheat bread	✓				✓		✓	✓					✓	✓
<b>Beverages</b>															
<u>Alcoholic</u>															
14003	Beer	✓					✓		✓		✓			✓	



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
14429	Water, municipal					✓	✓								
<b>Breakfast Cereals</b>															
<u>Ready-to-eat</u>															
08001	All-Bran <sup>®</sup> , Kellogg's <sup>®</sup>					✓			✓			✓			✓
08002	Alpha-Bits <sup>®</sup>											✓			
08003	Apple Jacks <sup>®</sup> , Kellogg's <sup>®</sup>					✓						✓			✓
43531	Apple-Cinnamon Cheerios <sup>®</sup>					✓						✓			
08029	Bran flakes, Post <sup>®</sup>					✓									
08028	Bran flakes <sup>®</sup> , Kellogg's <sup>®</sup>					✓			✓			✓			✓
08006	Bran Chex, Multi-Bran CHEX <sup>®</sup>					✓									
08010	Cap'n Crunch <sup>®</sup>					✓						✓			✓
08013	Cheerios <sup>®</sup>	✓				✓	✓	✓	✓	✓		✓	✓	✓	✓
44290	Clusters <sup>®</sup>					✓						✓			
43229	Cocoa Puffs <sup>®</sup>					✓						✓			
43230	Corn TOTAL <sup>®</sup>					✓						✓			
08068	Corn Pops <sup>®</sup> , Kellogg's <sup>®</sup>											✓			
08019	Corn CHEX <sup>®</sup>					✓									
43232	Cracklin' Oat Bran <sup>®</sup> , Kellogg's <sup>®</sup>					✓			✓			✓			✓
43361	Fiber One <sup>®</sup>					✓			✓			✓			
08030	Froot Loops <sup>®</sup> , Kellogg's <sup>®</sup>	✓				✓			✓			✓	✓		✓
08031	Frosted Mini-Wheats <sup>®</sup>											✓			
08034	Fruity Pebbles <sup>®</sup>											✓			
08035	Golden Grahams <sup>®</sup>					✓						✓			
08037	Granola, homemade								✓						

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
08039	Grape Nuts Flakes <sup>®</sup>					✓						✓			
08038	Grape Nuts <sup>®</sup>	✓				✓		✓	✓	✓		✓		✓	✓
43570	Honey Bunches of Oats <sup>®</sup>					✓						✓			
08045	Honey Nut Cheerios <sup>®</sup>					✓				✓		✓			
43298	Just Right <sup>®</sup> with Fiber Nuggets, Kellogg's <sup>®</sup>					✓						✓			✓
08020	Kellogg's Corn Flakes <sup>®</sup>	✓				✓		✓	✓	✓		✓	✓		
08069	Kellogg's Frosted Flakes <sup>®</sup>	✓				✓		✓	✓	✓		✓	✓		
08048	Kix <sup>®</sup>					✓						✓			
08049	Life <sup>®</sup>					✓									
08050	Lucky Charms <sup>®</sup>					✓			✓			✓			
43481	Mueslix <sup>®</sup>					✓			✓			✓			✓
44291	Oatmeal Raisin Crisp <sup>®</sup>					✓									
08076	Post Toasties <sup>®</sup>					✓						✓			
08058	Product 19 <sup>®</sup> , Kellogg's <sup>®</sup>					✓						✓			✓
44289	Quaker Oat Squares <sup>™</sup>					✓				✓		✓			✓
08062	Raisin Bran, Ralston Purina <sup>®</sup>					✓									
08061	Raisin Bran, Post <sup>®</sup>	✓				✓			✓	✓		✓		✓	✓
08060	Raisin Bran, Kellogg's <sup>®</sup>	✓				✓		✓	✓	✓		✓		✓	✓
43416	Raisin Nut Bran <sup>®</sup>					✓									
08065	Rice Krispies <sup>®</sup> , Kellogg's <sup>®</sup>	✓				✓		✓	✓		✓	✓			
08064	Rice CHEX <sup>®</sup>					✓									
08071	Smacks <sup>®</sup> , Kellogg's <sup>®</sup>											✓			
08067	Special K <sup>®</sup> , Kellogg's <sup>®</sup>					✓						✓			✓



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
20084	Cake flour, enriched	✓				✓									
20022	Cornmeal, yellow, degermed, enriched	✓				✓			✓			✓			
20100	Macaroni, enriched, cooked	✓				✓			✓			✓		✓	✓
20110	Noodles, egg, enriched, cooked	✓	✓		✓	✓			✓			✓			✓
20033	Oat bran								✓						
20047	Rice, white, long grain, enriched, parboiled, cooked	✓				✓									
20345	Rice, white, long grain, enriched, cooked, added salt	✓				✓		✓				✓			✓
20045	Rice, white, long grain, enriched, cooked	✓				✓	✓		✓			✓		✓	✓
20044	Rice, white, long grain, enriched, raw	✓				✓									
20049	Rice, white, long grain, enriched, instant, prepared	✓				✓									
20121	Spaghetti, enriched, cooked	✓				✓			✓			✓		✓	✓
20077	Wheat bran								✓						
20080	Whole wheat flour	✓				✓			✓			✓			✓
<b>Dairy Products</b>															
01001	Butter, salted	✓	✓	✓	✓			✓	✓						
<u>Cheese, natural</u>															
01009	Cheddar cheese	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓
01011	Colby cheese	✓	✓	✓			✓								✓
01012	Cottage cheese, creamed, 4% fat	✓		✓				✓							
01017	Cream cheese	✓	✓	✓	✓					✓					

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
01025	Monterey cheese			✓			✓								
01029	Mozzarella cheese, part skim milk, low moisture	✓	✓	✓	✓		✓	✓		✓		✓		✓	✓
01028	Mozzarella cheese, part skim milk			✓			✓								✓
01032	Parmesan cheese	✓	✓	✓	✓		✓	✓							✓
01035	Provolone cheese						✓								
01036	Ricotta cheese, whole milk	✓	✓	✓	✓		✓								✓
01040	Swiss cheese	✓	✓	✓	✓		✓								✓
<u>Cheese, processed</u>															
01042	American cheese	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
01048	American cheese spread	✓	✓	✓			✓	✓							✓
<u>Cream and cream products</u>															
01069	Cream substitute, nondairy powder	✓	✓	✓											✓
01049	Half and half	✓	✓	✓			✓								
01053	Heavy whipping cream			✓											
01050	Light cream		✓	✓											
01056	Sour cream	✓	✓	✓	✓		✓			✓					
<u>Milk</u>															
01088	Buttermilk, cultured, nonfat						✓								
01103	Chocolate milk, commercial, lowfat, 2% fat	✓		✓			✓		✓					✓	✓
01102	Chocolate milk, commercial, whole	✓	✓	✓			✓		✓			✓		✓	✓
01096	Evaporated milk						✓								
01082	Lowfat milk, 1% fat	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓
01079	Lowfat milk, 2% fat	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
04047	Coconut oil			✓											
04518	Corn oil	✓	✓	✓											
04120	French dressing	✓	✓	✓				✓							
04114	Italian dressing	✓	✓	✓				✓							
04002	Lard	✓	✓	✓											
43213	Margarine-like spread, stick or tub, 60% fat,		✓												
04128	Margarine, imitation, unspecified oils, 40% fat	✓	✓	✓				✓		✓					
04132	Margarine, regular, unspecified oils, 80% fat	✓	✓	✓			✓	✓		✓	✓			✓	
04130	Margarine, soft, unspecified oils, 80% fat	✓	✓	✓				✓		✓					
04018	Mayonnaise-type dressing	✓	✓	✓				✓							
04025	Mayonnaise	✓	✓	✓	✓	✓		✓		✓		✓			
04053	Olive oil	✓	✓	✓											
43018	Ranch dressing		✓												
04031	Shortening, household	✓	✓	✓											
04044	Soybean oil	✓	✓	✓											
04543	Soybean oil (hydrogenated) and cottonseed oil			✓											
04034	Soybean oil (hydrogenated)	✓	✓	✓											
04017	Thousand island dressing	✓	✓												
<b>Fast Foods</b>															
21037	Chicken nuggets	✓	✓	✓	✓	✓		✓				✓		✓	✓
21136	French fries, in beef tallow	✓	✓	✓					✓			✓		✓	

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
21138	French fries, in vegetable oil	✓	✓	✓		✓		✓	✓			✓	✓	✓	✓
<b>Fish and Shellfish</b>															
<u>Finfish</u>															
15234	Catfish, farmed, raw	✓	✓		✓							✓		✓	
15015	Cod, Atlantic, raw				✓							✓		✓	
15028	Flounder/sole, raw	✓			✓							✓		✓	
15033	Haddock, raw											✓			
15240	Trout, rainbow, farmed, raw											✓			
15121	Tuna, light, canned in water, drained solids	✓			✓	✓		✓				✓		✓	✓
15119	Tuna, light, canned in oil, drained solids	✓				✓									
<u>Shellfish</u>															
15160	Clams, canned, drained solids					✓									
15157	Clams, raw					✓									
15140	Crab, blue, steamed				✓										✓
15167	Oyster, eastern, raw					✓									✓
15170	Oyster, eastern, canned														✓
15152	Shrimp, canned				✓	✓									
15149	Shrimp, raw				✓	✓									✓
<b>Fruit and Fruit Juices</b>															
09016	Apple juice	✓				✓						✓		✓	
09003	Apples with skin	✓				✓		✓				✓	✓	✓	
09020	Applesauce, sweetened, canned	✓				✓		✓							
09019	Applesauce, unsweetened, canned							✓							

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
09037	Avocados, all varieties											✓		✓	
09040	Bananas	✓				✓			✓			✓	✓	✓	✓
09181	Cantaloupe								✓	✓	✓	✓	✓	✓	
09135	Grape juice, bottled or canned	✓										✓		✓	
09111	Grapefruit, pink, red, or white								✓			✓	✓	✓	
09123	Grapefruit juice, canned												✓	✓	
09132	Grapes	✓							✓			✓	✓	✓	
09215	Orange juice, frozen concentrate, diluted	✓				✓	✓		✓	✓	✓	✓	✓	✓	✓
09207	Orange juice, canned												✓	✓	
09206	Orange juice	✓				✓			✓			✓	✓	✓	
09200	Oranges	✓					✓		✓			✓	✓	✓	
09236	Peaches								✓					✓	
09252	Pears													✓	
09273	Pineapple juice, canned											✓		✓	
09298	Raisins	✓				✓			✓			✓		✓	
09316	Strawberries								✓				✓	✓	
09326	Watermelon											✓	✓	✓	
<b>Legumes and Nuts</b>															
16008	Baked beans with franks, canned								✓						
16010	Baked beans with pork and sweet sauce, canned								✓						
16011	Baked beans with pork and tomato sauce, canned	✓				✓	✓	✓	✓					✓	✓
16014	Black beans, raw								✓						

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
16063	Black-eyed peas (cowpeas), cooked					✓			✓						
43112	Chili (barbecue, ranch style), cooked					✓		✓	✓			✓		✓	✓
16033	Kidney beans, red, cooked					✓			✓					✓	
16034	Kidney beans, red, canned	✓				✓		✓	✓					✓	✓
16072	Lima beans, large, cooked					✓			✓			✓		✓	✓
12098	Peanut butter	✓	✓	✓		✓		✓	✓			✓		✓	✓
16089	Peanuts, oil-roasted, salted	✓	✓						✓						✓
16043	Pinto beans, cooked	✓				✓			✓			✓		✓	✓
16042	Pinto beans, raw	✓				✓			✓			✓		✓	✓
12155	Walnuts, English		✓												
16049	White beans, raw	✓				✓			✓			✓		✓	✓
16050	White beans, cooked					✓			✓					✓	✓
<b>Meat<sup>3</sup> and Game</b>															
13262	Beef, short loin, 1/4 " trim, broiled, separable lean and fat		✓	✓								✓			✓
13220	Beef, top round, choice, 1/4" trim, pan-fried, separable lean	✓	✓		✓	✓						✓		✓	✓
13270	Beef, short loin, 1/4 " trim, broiled, separable lean	✓			✓	✓						✓		✓	✓
13287	Beef, top sirloin, 1/4" trim, broiled, separable lean														✓
13288	Beef, top sirloin, choice, 1/4 " trim, raw, separable lean														✓
13217	Beef, top round, 1/4 " trim, broiled, separable lean	✓			✓	✓						✓		✓	✓





## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
13143	Beef, rib, small end, select, 1/4 " trim, roasted, separable lean					✓						✓		✓	✓
13150	Beef, shortribs, choice, braised, separable lean														✓
13136	Beef, rib, small end, 1/4" trim, broiled, separable lean					✓						✓			✓
13124	Beef, rib, small end, 1/4" trim, broiled, separable lean and fat			✓											✓
13101	Beef, rib, large end, 1/4" trim, roasted, separable lean and fat		✓	✓											✓
13113	Beef, rib, large end, 1/4" trim, roasted, separable lean					✓									✓
13347	Beef, corned beef, brisket, cooked														✓
13305	Ground beef, lean, broiled, medium	✓	✓	✓	✓	✓						✓		✓	✓
13312	Ground beef, regular, broiled, medium	✓	✓	✓	✓	✓		✓				✓		✓	✓
13313	Ground beef, regular, broiled, well done	✓	✓	✓	✓	✓						✓		✓	✓
13302	Ground beef, lean, raw	✓	✓	✓	✓	✓						✓		✓	✓
13300	Ground beef, extra lean, pan-fried, medium														✓
13295	Ground beef, extra lean, raw														✓
13298	Ground beef, extra lean, broiled, medium	✓	✓	✓	✓	✓						✓		✓	✓
13314	Ground beef, regular, pan-fried, medium	✓	✓	✓	✓	✓						✓		✓	✓
17164	Venison, raw				✓	✓						✓			✓
<b>Pork</b>															



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
05027	Chicken liver				✓	✓				✓					
05014	Chicken, light and dark meat, stewed	✓	✓		✓	✓						✓		✓	✓
05009	Chicken, light and dark meat and skin, roasted	✓	✓	✓	✓	✓						✓		✓	✓
05069	Chicken, drumstick, meat and skin, roasted														✓
05060	Chicken, breast, meat and skin, roasted	✓	✓	✓	✓	✓						✓		✓	✓
05064	Chicken, breast, meat, roasted	✓	✓		✓	✓						✓		✓	✓
42005	Chicken, drumstick, meat, fried	✓	✓		✓	✓						✓		✓	✓
05082	Chicken, leg, meat, roasted											✓			✓
05006	Chicken, light and dark meat and skin, raw											✓			
05078	Chicken, leg, meat and skin, roasted	✓	✓	✓	✓	✓						✓		✓	✓
42004	Chicken, breast, meat, fried	✓	✓	✓	✓	✓						✓		✓	✓
<u>Turkey</u>															
05166	Turkey, light and dark meat and skin, roasted	✓	✓		✓	✓						✓		✓	✓
05194	Turkey, leg, meat and skin, roasted														✓
05186	Turkey, light meat, roasted	✓			✓	✓						✓		✓	✓
05182	Turkey, light meat and skin, roasted	✓	✓	✓	✓	✓						✓		✓	✓
<b>Sausages, Cured Meats, and Luncheon Meats</b>															
10124	Bacon, broiled or pan-fried	✓	✓	✓	✓	✓		✓				✓	✓	✓	✓
07008	Bologna, beef and pork	✓	✓	✓	✓	✓		✓				✓			✓
07007	Bologna, beef	✓	✓	✓	✓	✓		✓				✓			✓

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
07014	Braunschweiger					✓				✓					
07022	Frankfurters, all beef	✓	✓	✓	✓	✓		✓				✓	✓	✓	✓
07025	Frankfurters, turkey														✓
07023	Frankfurters, beef and pork	✓	✓	✓	✓	✓		✓				✓	✓	✓	✓
10183	Ham, extra lean and regular, roasted	✓	✓	✓	✓	✓		✓				✓	✓	✓	✓
10153	Ham, whole, fully cooked, roasted, separable lean							✓				✓			✓
10134	Ham, extra lean, roasted					✓		✓				✓		✓	✓
10182	Ham, extra lean and regular, unheated	✓	✓	✓	✓	✓		✓				✓	✓	✓	✓
07037	Kielbasa/kolbassy	✓	✓	✓				✓							✓
13355	Pastrami														✓
07057	Pepperoni	✓	✓	✓	✓			✓				✓		✓	✓
07069	Salami, beef or pork			✓		✓									
10165	Salt pork, raw	✓	✓	✓				✓							
07064	Sausage, pork, cooked	✓	✓	✓	✓	✓		✓				✓		✓	✓
07065	Sausage, pork and beef, fresh, cooked	✓	✓	✓				✓							✓
07074	Smoked sausage, pork	✓	✓	✓				✓				✓			✓
07080	Turkey ham					✓									✓
<b>Snacks</b>															
19003	Corn chips	✓	✓						✓			✓			
19008	Corn puffs, cheese flavor	✓	✓												
19034	Popcorn, air-popped								✓						✓



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
<b>Sweets</b>															
19141	"M&M's" <sup>®</sup> Plain Chocolate Candies			✓											
19078	Baking chocolate			✓											
19334	Brown sugar	✓													
19166	Cocoa, powder, processed with alkali					✓			✓					✓	✓
19349	Dark corn syrup	✓													
19296	Honey	✓													
19095	Ice cream, vanilla	✓	✓	✓	✓		✓	✓			✓			✓	✓
19300	Jellies	✓													
19353	Maple syrup														✓
19120	Milk chocolate	✓	✓	✓											
19304	Molasses													✓	
19150	REESE'S <sup>®</sup> Peanut Butter Cups			✓											
19155	SNICKERS <sup>®</sup> Bar	✓	✓	✓											
19335	Sugar, granulated	✓													
19336	Sugar, powdered	✓													
19360	Table blend pancake syrup, 2% maple	✓													
<b>Vegetables</b>															
11091	Broccoli, cooked	✓				✓	✓		✓	✓	✓	✓	✓	✓	✓
11090	Broccoli, raw												✓		
11109	Cabbage, raw					✓			✓			✓	✓	✓	
11110	Cabbage, cooked								✓				✓	✓	
11655	Carrot juice, canned									✓	✓				

## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
11125	Carrots, cooked	✓				✓	✓		✓	✓	✓	✓		✓	✓
11131	Carrots, frozen, cooked								✓	✓	✓				
11124	Carrots, raw	✓				✓			✓	✓	✓	✓	✓	✓	
11935	Catsup	✓				✓		✓	✓	✓	✓	✓	✓	✓	
11136	Cauliflower, cooked											✓			
11143	Celery, raw					✓	✓		✓			✓		✓	
11162	Collards, cooked								✓						
11901	Corn, sweet, white, cooked								✓						
11174	Corn, sweet, yellow, cream style, canned								✓					✓	
11168	Corn, sweet, yellow, cooked	✓	✓			✓			✓			✓	✓	✓	✓
11192	Cowpeas, cooked								✓					✓	
11206	Cucumber, pared													✓	
11404	French fried potatoes, frozen, restaurant prepared in oil	✓	✓	✓					✓			✓		✓	
11403	French fried potatoes, oven-heated from frozen	✓	✓	✓		✓			✓			✓		✓	
11670	Hot chili peppers								✓				✓		
11252	Lettuce, iceberg	✓				✓	✓		✓	✓	✓	✓	✓	✓	✓
11032	Lima beans, cooked								✓					✓	
11584	Mixed vegetables, frozen, cooked					✓			✓	✓	✓			✓	
11260	Mushrooms, raw													✓	
11261	Mushrooms, cooked													✓	
11282	Onions, raw	✓				✓	✓		✓			✓	✓	✓	✓
11283	Onions, cooked								✓			✓	✓	✓	



## APPENDIX 1—Continued

ID <sup>1</sup>	Description <sup>2</sup>	Food Energy	Fat	Saturated fat	Cholesterol	Iron	Calcium	Sodium	Dietary fiber	Vitamin A	Carotene	Vitamin B <sub>6</sub>	Vitamin C	Potassium	Zinc
11540	Tomato juice, canned							✓				✓	✓	✓	
11547	Tomato puree, canned					✓			✓	✓	✓	✓	✓	✓	
11546	Tomato paste, canned					✓			✓	✓		✓	✓	✓	
11549	Tomato sauce, canned	✓				✓		✓	✓	✓	✓	✓	✓	✓	✓
11529	Tomatoes, raw	✓				✓			✓	✓	✓	✓	✓	✓	✓
11660	Tomatoes, stewed	✓				✓		✓	✓			✓	✓	✓	✓
11531	Tomatoes, whole, canned	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11569	Turnip greens, cooked									✓	✓				
11578	Vegetable juice cocktail, canned							✓				✓	✓	✓	
11644	Winter squash, baked									✓				✓	
<b>Other</b>															
18372	Baking soda							✓							
18369	Baking powder, double-acting, household						✓	✓							
43158	Saccharin													✓	
02047	Salt, table							✓							
16123	Soy sauce							✓							
<b>Total number of foods</b>		2 2 2	1 2 5	1 1 0	7 2	2 3 5	7 2	1 0 4	1 3 5	6 7	3 1	2 0 4	6 8	1 7 8	2 1 3

## APPENDIX 2

## FOOD MIXTURES IDENTIFIED AS KEY FOODS

ID <sup>1</sup>	Description
2721210	Beef and noodles with tomato-based sauce
2711100	Beef with tomato sauce
2721110	Beef stew with potatoes and tomato-based sauce
2721410	Beef loaf
2731131	Beef stew with potatoes, carrots, onion, peas, tomatoes
2731141	Beef stew with potatoes, carrots, onion, peas, gravy
5310526	Cake, chocolate, with frosting
5311600	Cake, pound
5310426	Cake, carrot, with frosting
2610714	Catfish, floured or breaded, fried
2751031	Cheeseburger with tomatoes and/or catsup, bun
2751031	Cheeseburger, 1/4 lb, with mayonnaise and tomatoes, bun
2734710	Chicken or turkey pot pie
2711141	Chili con carne with beans
5220100	Cornbread, prepared from mix
5220206	Cornbread, from home recipe
2751030	Double cheeseburger (2 patties), mayonnaise, double decker bun
3210300	Egg salad
3220201	Egg, cheese, ham with English muffin
3210503	Egg omelet with ham
3210508	Egg omelet/scrambled egg with chesse and ham/bacon
5530100	French toast (includes home-prepared and commercial)
5815031	Fried rice with meat
2751051	Hamburger, with tomato and/or catsup, bun
2751056	Hamburger, 1/4 lb, with mayonnaise and tomatoes, bun
5813001	Lasagna
5814511	Macaroni and cheese
5230401	Muffins, bran (includes wheat bran and oat bran)
5118602	Muffins, English, plain, toasted
5230201	Muffins, fruit and or nut
3210495	Omelet, plain, no fat added
3210490	Omelet/scrambled eggs
3210501	Omelet with cheese
2835531	Oyster stew
5510100	Pancakes, plain
2612714	Perch, floured or breaded, fried
5330100	Pie, apple
5334700	Pie, pumpkin
5810622	Pizza, cheese, thin crust
5810673	Pizza with meat and vegetables, thick crust
5810672	Pizza with meat and vegetables, thin crust
5810652	Pizza with meat, thin crust
5810621	Pizza with cheese, unspecified crust
5810651	Pizza with meat, unspecified crust
5810653	Pizza with meat, thick crust
7160301	Potato salad
7170101	Potato salad with egg
7150102	Potatoes, mashed from fresh, with milk and fat
7130501	Potatoes, scalloped
7150100	Potatoes, mashed
7150103	Potatoes, mashed from fresh, with fat

APPENDIX 2—*Continued*

ID <sup>1</sup>	Description
7150104	Potatoes, mashed, from dry with milk and fat
4120501	Refried beans
2631914	Shrimp, floured or breaded, fried
7565606	Soup, vegetable beef, chunky style
5813211	Spaghetti/noodles with tomato sauce
2711105	Spaghetti sauce with meat, homemade
5813231	Spaghetti with tomato sauce and meatballs
7440401	Spaghetti sauce
5816341	Spanish rice
7340900	Sweetpotato casserole or mashed
7340600	Sweetpotatoes, candied
5810132	Taco or tostado with beef, cheese, lettuce, tomato, salsa
5520100	Waffles, plain

<sup>1</sup> Seven-digit numbers denote items from the USDA Nutrient Database for Individual Food Intake Surveys, Release 7 (USDA, 1994b).