USDA Update

Frank N. Hepburn
Human Nutrition Information Service

Recent publications and publication plans for 1986:

HG-72 Nutritive Value of Foods (published)

AH-8-13 Beef Products (in press)
AH-8-14 Beverages (published)
AH-8-15 Finfish and Shellfish Products (in preparation)
AH-8-16 Legumes (in preparation)

Provisional Table on Omega-3 Fatty Acids (published)
Provisional Table on Vitamin K (in press)
Provisional Table on Sugars (in preparation)
Provisional Table on Vitamin D (in preparation)

Recent machine readable tapes made available through NTIS:

USDA Nutrient Data Base for Individual Food Intake Surveys, Release 2, 1986 (accession number PB86-206299/HBF)

Data sets used to create USDA Nutrient Data Base for Individual Food Intake Surveys, Release 2 (accession number PB86-206281/HBF):

1. Recipe File for Release 2 of USDA Nutrient Data Base for Individual Food Intake Surveys

2. Primary Nutrient Data Set for USDA Nationwide Food Consumption Surveys, Release 1

3. USDA Table of Nutrient Retention Factors, Release 1

Plans for publications in 1987:

AH-8-21 Fast Foods
AH-8-17 Lamb, Veal and Game
AH-8-19 Sugars and Sweets
HG-90 Conserving Nutritive Values (revision)
HERR- Sugars in Foods
Provisional Table on Dietary Fiber

Plans for publications in 1988:

AH-8-18 Baked Products
AH-8-20 Cereal Grains, Pastas, Snacks
AH-8-22 Mixed Dishes
AH-8-23 Miscellaneous Foods
AH-102 Food Yields (revision)

We are using information available in the Primary Nutrient Data Set,together with consumption data from the 1985 CSFII to set priorities for foods and nutrients to be studied in analytical studies. The source code in the Primary Nutrient Data Set provides information on the relative strengths and weaknesses of the data; the food consumption data provides information on the importance of foods in supplying each nutrient to the daily diet. We have submitted plans for several contracts based on these factors, which will strengthen the comprehension and validity of our data bases. They are, of course, subject to the availability of funds.

We continue to work closely with the Nutrient Composition Laboratory (NCL) at Beltsville, Maryland, in efforts to improve and develop new analytical data. Two of the current cooperative efforts include a study on nutrients in sweet bakery foods and a major study on measuring the content and variability of selenium in foods in the U.S. The plan for the selenium study was developed cooperatively, using information on selenium content of foods culled from the literature by Nutrient Data Research (NDRB) staff and evaluated by NCL staff. By adding selenium values to the Primary Data Set, the contribution of foods to the selenium intake of individuals in the 1985 CSFII study was measured. The NCL is now in the process of collecting some of the samples and preparing them for analysis. The study incorporates built-in quality control checks and employs the use of reference materials to assure the validity of results. We believe this study will serve as a model for establishing a standard protocol for generating reliable data.

An update on the assessment of analytical methodology has been provided by Dr. Beecher and is appended to this report.

STATE OF DEVELOPMENT OF METHODS FOR NUTRIENTS IN FOODS
Nutrient Composition Laboratory
BHNRC, ARS, USDA
Beltsville, MD 20705
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Nutrient category	State of Methodology[a/] Adequate	Substantial	Conflicting	Lacking
Carbohydrates, fiber and sugars		Individual sugars Fiber (AOAC) Starch	Fiber components	
Energy	Bomb calorimetry		Calculated	
Lipids		Cholesterol Fat (total) Fatty acids (common)	Sterols Fatty acids (isomers)	
Minerals/Inorganic nutrients	Calcium Copper Magnesium Phosphorus Potassium Sodium Zinc	Iron Selenium	Arsenic Chromium Fluorine Iodine Manganese	Cobalt Molybdenum Silicon Tin Vanadium Molecular species
Proteins and amino acids	Nitrogen (total)	Amino acids (most)	Amino acids (some) Protein (total)	
Vitamins		Niacin Riboflavin Thiamin Vitamin B-6 Vitamin E	Vitamin A Vitamin B-12 Vitamin C Vitamin D Pantothenic acid	Biotin Carotenoids (pro-vit.A) Choline Folacin Vitamin K
Other			Phytate	Carotenoids (non-vit.A)

a/ Description of methodology states

Factors	Adequate	Substantial	Conflicting	Lacking
Accuracy	Excellent	Good	Fair	Poor
Speed of analysis	Fast	Moderate	Slow	Slow
Cost per analysis	Modest (<$100)	Modest to high	High	?
Development needs	---	Method modif. Extraction proc. Applications	Method develop. modif. Extraction proc. Applications	Method develop. Extraction proc. Applications