

USING THE FACTORED FOOD VOCABULARY IN  
FOOD COMPOSITION DATA BASES

The Factored Food Vocabulary (FFV) is a system for describing foods based on twelve characteristics related to their safety and nutritional value. It has singular usefulness both in developing and in utilizing food composition data bases. By unambiguously describing foods, the FFV assures that the data retrieved from a food composition data base fits the user's needs (see accompanying figure).

Each food characteristic is described by a factor. Each factor is a set of related descriptor terms. By choosing one or more of these terms, a food characteristic is precisely defined. The factors and the terms associated to them are described in Table 1.

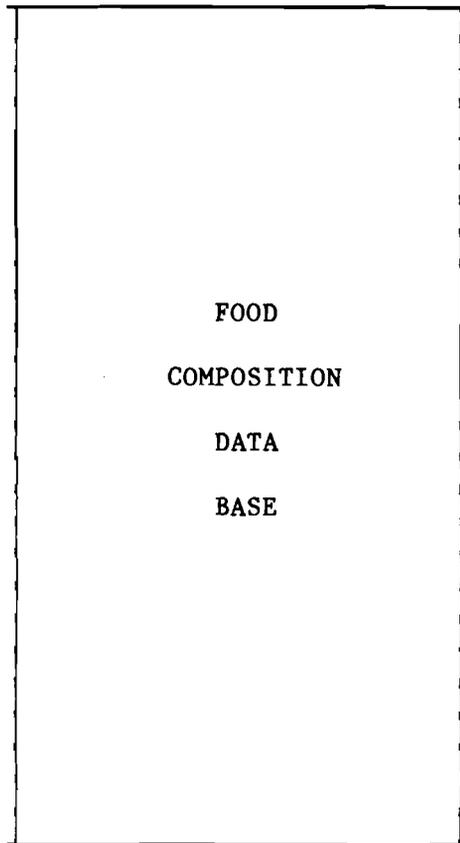
Every factor term is defined a dictionary of terms. The dictionary can expand to include additional terms that become necessary as the data base enlarges. Each food described using the FFV has, in addition to its descriptor terms, a unique identifying number and name (see Tables 2 - 4). Foods sharing similar characteristics contain the same factor terms in their FFV description.

To search the data base for foods having specific characteristics, the factor terms for this characteristic are identified. All terms of a factor have a code beginning with the letter assigned to the factor followed by a three-digit designation. Any Boolean combination of factor codes may be used in searches. For example, if data on the nutrient composition of all products produced from cow's milk were desired, the factor terms cow (B1201) and milk (C235) would be selected. The foods retrieved would be all those having both of these factor terms in their description.

Within each factor, related terms are arranged hierarchially. This allows searches with varying levels of specificity to be carried out. For example, the factor terms milk or milk product, frozen dairy dessert, and cheese or cheese product are included under the broader term dairy product. Thus a search using the code for dairy product would retrieve a greater number of foods than would a search using the code for milk or milk product. Several levels of terms with increasingly broad definitions are included within each factor to serve the data base user's needs.

To summarize, the FFV is a food description language. Each factor term or combination of terms can serve as an access point for data retrieval. With the FFV, a food composition data base can be built that retains easy access to precisely selected data. These features make the FFV a powerful tool in developing food composition data bases.

data **FACTORED FOOD** →  
**VOCABULARY**  
unambiguously describes  
and classifies foods



**FACTORED FOOD** → data  
**VOCABULARY**  
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Table 1

FACTOR	NUMBER OF TERMS ASSOCIATED TO IT	EXAMPLES
A) PRODUCT TYPE Manufacturing, consumption and functional characteristics.	174	dessert bakery product soup
B) FOOD SOURCE Animal, plant or chemical source of food or its major ingredient.	695	sugar producing plant grain or seed- producing plant shellfish or crustacean
C) PART OF PLANT OR ANIMAL Anatomical part of plant or animal from which a food product or its major ingredient is derived.	160	seed or kernel root, tuber or bulb, skeletal meat
E) PHYSICAL STATE, SHAPE OR FORM Physical state (solid, semisolid, semiliquid, liquid) of a food. Characteristics such as viscosity,	55	liquid with low viscosity semiliquid with smooth consistency whole, natural shape
F) DEGREE OF PREPARATION Degree of cooking food has undergone.	11	uncooked, raw partially cooked,
G) COOKING METHOD Cooking method used by the consumer.	30	cooked by dry heat cooked by moist heat cooked by microwave
H) TREATMENTS APPLIED AND INGREDIENTS Additional processing steps, including adding, removing, modifying or substituting components. The ingredients, other than the predominant one, in mixed foods are included here.	172	fat removed, hydrogenated pickled

J) PRIMARY PRESERVATION METHOD	45	preserved by fermentation preserved by adding chemicals dehydrated or dried
K) PACKING MEDIUM Medium in which food is packed for preservation and handling and/or palatability and consumer appeal.	38	packed in broth, packed in salt brine packed in water
M) CONTAINER OR WRAPPING Main container materials and form.	111	glass container, metal container, ceramic or earthenware
N) FOOD CONTACT SURFACE Container materials in direct contact with food.	40	glass, coating enamel plastic
P) USER GROUP Age and dietary prescription of the user group for which the food product	38	human food, no age specification, regular diet human food, reduced calorie infants or junior food, regular infant diet

Table 2

IDENTIFICATION NUMBER: 001

NAME: Evaporated Whole Milk

DESCRIPTOR TERMS:

A148	Milk or milk product
B1201	Cow
C235	Milk
E139	Liquid, high viscosity, with no visible particles
F14	Fully cooked
G003	Cooking method not applicable
H114	Water removed to reconstitution ration 1 plus 1
J123	Sterilized by heat, canned
K001	No packing medium
M151	Metal container
N24	Coating Enamel
P24	Human food, no age specification, regular diet

Table 3

IDENTIFICATION NUMBER: 003

NAME: Margarine, made from hydrogenated corn oil

DESCRIPTOR TERMS:

A231	Margarine
B1379	Field Corn
C190	Fat or oil
E119	Semisolid with smooth consistency
F14	Fully cooked
G003	Cooking method not applicable
H174	Hydrogenated
H199	Fortified
H213	Vitamin A added
H206	Alkalized
H197	Bleached
J100	Preserved by adding chemicals
K03	No packing medium used
M001	Container or wrapping not known
N01	Food contact surface not known
P24	Human food, no age specification, regular diet

Table 4

IDENTIFICATION NUMBER: 002

NAME: Whole Milk

DESCRIPTOR TERMS:

A148	Milk or milk product
B1201	Cow
C235	Milk
E123	Liquid, low viscosity, with no visible particles
F18	Partially cooked
G003	Cooking method not applicable
H003	No treatment applied
J135	Pasteurized by heat
K001	No packing medium
M130	Glass container
N40	Glass
P24	Human food, no age specification, regular diet