IFDA Data Exchange Standard

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Thanks very much, and welcome to the 20th National Nutrient Databank Conference. It's a pleasure to have the opportunity to address this group, and to let you know that we've made significant progress toward the demolition of the "Tower of Babel" in the exchange of nutrient database.

The purpose of my presentation is to inform you that the International Foodservice Distributions Association's Technical Standards Committee has created a version of the IFDA Product Data Exchange Format which provides significantly enhanced functionality for the exchange of nutritional information. I will provide you with an understanding of the structure of the IFDA Product Data Exchange Format, and I hope that you'll adopt this format as a means of exchanging data between manufacturers, distributors, software and database suppliers, who currently serve your needs. In the future, it is likely that this data exchange format will be the primary way in which nutritional data is sent back and forth between organizations, much as the ANSI standard for Electronic Data Interchange, or "EDI" have standardized the interchange of data in this arena.

In the past few years there has been an increase in the demand for nutrient composition data and food product information. This has been fueled, in part, by the wholesale and retail sectors of the food industry, as a result of food labeling legislation. The passage of the Nutrition Labeling and Education Act of 1991 requires mandatory food labeling for all retail products. The wholesale sector has focused on developing a response to the need for a vehicle to efficiently exchange the needed information, in hopes of avoiding a mandatory labeling act for wholesale foodservice products.

At the same time, the lifestyle in the United States has changed. One out of every two meals is eaten away from home, and frequently the food served at home is prepared or processed elsewhere. The US Dietary Guidelines have suggested that a diet lower in fats, saturated fat, sugar, and sodium might reduce the risk for certain diseases. Manufacturers have responded to these situations by creating a market of ever-changing products, whose "brand name alternatives" are increasingly differentiated based upon nutritional claims. This has increased the demand for food composition data and product information on these "brand name" products by consumers, as well as by the healthcare education and foodservice industry in general.

In response to this need, the International Foodservice Distributors Association (IFDA), who are responsible for distribution of about 75 - 70% of the food sold in the wholesale markets, established a committee in 1990 to determine how they could meet the demands of their customers for up-to-date nutrient and product information.

A technical standards committee under the chairmanship of Tom Morin, Vice President of Quality Assurance for ComSource, was formed in September of 1990. It's goal was to create standardized data exchange format, that could be used by various trading partners, to exchange information regarding food and supply data. Members of this task force represented dietetics, manufacturers, software companies, trade associations, and distributors. The first version of the IFDA Product Data Exchange Format was approved in September of 1991.

Because of increased interest in nutrition, the committee realized that the original lists of nutrients in the first version had to be expanded. Further, the task force recognized that different interest groups such as manufacturers, distributors, brokers, software developers, researchers, etc., each had different data requirements, which should be taken into account in order to develop a more comprehensive exchange specification. A nutritional task force was formed in 1993 to study the additional information which was required to satisfy these diverse needs. I was selected to chair this task force.

By the time Version 2.0 of the IFDA Standard was released in 1994, it was apparent that the standard was becoming a widely-accepted vehicle for more than just the distributors and their customers. The IFDA standard was quickly becoming a vehicle for communication and updating of many of the nutritional databases used in the marketplace. But, version 2.0 lacked sufficient detail to provide insight into the quality control procedures associated with the data, or to allow independent validation of the data.

IFDA began working with the Nutrient Data Laboratory ("NDL") of the Agricultural Research Service ("ARS") in the Fall of 1994, to add validity and quality control information to the IFDA Product Data Exchange Format. Under the leadership of Dr. Wayne Wolf and Ms. Joanne Holden, three new record types were added to the IFDA standard in addition to the nutrition record. These three records contain the quality control information regarding the validation checks which have been performed on data prior to submission of data. These validation checks were developed by the Quality Assurance Team at the NDL, under the leadership of Karen Andrews, a nutritionist. This validation is voluntary, and ARS proposes to implement these standards over a 5-year period. It is hoped that the NDL's involvement with IFDA will result in an increased amount of "brand name" data being made available to the NDL, who produce Agricultural Handbook #8, and other nutrient data sets.

Let's spend a few minutes exploring the purpose for the data exchange format. Simply stated, the format is a standard for the *exchange* of data in ASCII format. In developing the data exchange format, we carefully studied the data exchange format which has been developed by INFOODS. The IFDA Product Data Exchange Format is a superset of the INFOODS standard, which is described in detail in John Klensin's book, "Identification of Food Components for INFOODS Data Interchange."

We all recognize that the format is a "work in progress". As such, it has been designed to accommodate growth and expansion in the future, as the requirements of the various market participants, federal regulators, nutrition researchers, and others, evolve and change. This current version will provide the user with an assurance of *upward compatibility* with future versions, so any investment in software which is made to bring systems into conformity with the current version will not be lost as a result of future "enhancements" to this standard.

Many have commented that the data exchange format does not seem a logical way to organize a database, or that a "relational database" would be a better way in which to present nutritional data. This format is merely a format for the *exchange* of data between systems, and is not meant to be a "normative guideline" for the best way of laying out a nutrition database. It is a structure in which all of the useful data pertinent to food items and their nutritional characteristics can be provided, in support of a variety of different applications.

The beneficiaries of the standard include: food and supply distributors, manufacturers, brokers, researchers, clinical dietitians, the Agricultural and Research Service (or USDA), the International Community, and software developers.

Some people have asked "why not just use the INFOODS data interchange standard?" This question was considered carefully by our committee before making our recommendations. There are three specific reasons why we chose to build on the INFOODS standard, rather than to take it "off the shelf".

1. The INFOODS standard only accommodates the food composition data, but the stakeholders in the IFDA Product Data Exchange Format require more product-specific information.
2. The INFOODS standard does not support the diversity of data representation formats which are needed in contemporary software. For example, some software programs utilize a "short name", while others use a longer, more verbose descriptive title for each product.
3. The INFOODS data interchange standard does not provide a structure that manufacturers and labs can easily understand.

Providing a relatively simple and easy to understand structure for the data is important if the standard is to gain widespread acceptance. There are many smaller food manufacturers and distributors who do not have the resources to deal with complex methods of data interchange, and who will need to rely on data editors provided by outside companies. These companies in turn will rely on the stability and robustness of the IFDA Product Data Exchange format, to maintain their competitive position and profitability. (It's an expensive business to keep re-writing software every 6 to 12 months.)

There were a variety of sources of feedback regarding the standard which resulted in the changes that have been incorporated in Version 3. One of the sources of information was the USDA Child Nutrition Program, at whose urging we included a number of important fields, including the following: Date of change or Product Introduction, Reason for Change (new, reformulated, updated), Product is produced specifically for Child Nutrition Program, and Child Nutrition Label Number.

You'll note that the attached table, which gives full details regarding the specification format, is organized by "field type". The field type is not a part of the specification, but is present to facilitate reading the fields in a more organized format.

In some instances, fields have been included in the standard which some would argue are redundant. For example, fields 225 and 230 are food energy, expressed in both Kcal and Kj. The reason for accommodating both of these items is that there are a large number of nutrient databases that use each of these two units of measure. Rather than requiring every user to design software to convert data from one unit to the other, it seemed more sensible to allow the transmission of energy in either unit of measure.

Most of the food composition attributes have an associated INFOODS Tag Name. The "Default Food Tag Name" which is specified in Attachment 1 allows the user to cross-reference the definition of each field description to the INFOODS descriptors, assuring that the proper item has been selected. If, for example, a user wished to provide information on the total protein value of a food, one would use field number 250 (protein, total). The IFDA standard specifies that the default food tag name for this food is "PROCNT," which is "Protein, total; calculated from total nitrogen (measured in grams)." The tag name can be omitted. If the protein values to be provided were calculated from amino nitrogen, for example, then the user would still use field number 250, but would specify an override food tag name of "Procan."

Illustration 2 is a copy of pages 43, 44 and 45 of John Klensin's "Identification of Food Components for INFOODS Data Interchange" (©The United Nations University, 1989) that provide detailed descriptions of several alternative means of communicating protein values. These examples also illustrate the method for utilizing secondary tag names to identify specific conversion factors used in determining the protein value.

By providing a default food tag name, and the ability to provide override food tags, we have given the data exchange format a level of generality that will allow it to fully accommodate all current and future food attributes which are accommodated via the INFOODS Data Exchange Standard.

In developing the IFDA Standard (Version 3), recommendations have been established for a "Recommended Data Set" as well as a "Minimum Data Set." The "Minimum Data Set" ("MDS") represents that set of food composition attributes that are required in order for the data to provide conformity with NLEA labeling legislation. The Recommended Data Set ("RDS") represents the set of data which is available from the US Department of Agriculture in its various nutrient datasets.

Because incomplete nutritional data can be misleading, it is recommended that when manufacturers, distributors, and others provide information on new food products, they provide at least all of the information outlined in the Minimum Data Set recommendation.

The current version of the data exchange format has been modified to include information that will allow end-users to create a date-sequenced or hierarchical database containing product information over time. By providing field 115 (Date of Change or Product Introduction), field 120 (Reason for Change), and by providing the ability to override these fields at the individual or food attribute level, the system provides an ability to download information over time, and for the end-user to construct a hierarchical or date-sequenced database containing nutritional information on products over time.

There is considerable interest in obtaining nutrition label data for research purposes, as well as for the purpose of comparing and contrasting brand name product nutrition claims. The Nutrition Labeling and Education Act (NLEA) provides specific standards for the creation and display of nutritional information. Among these standards are the precision to which data must be displayed.

Some practitioners have expressed concern in utilizing a data exchange structure to transmit and receive "rounded values". However, others (notably the manufacturers) are reluctant to provide unrounded information, since government regulations only require disclosure of rounded data. Accordingly, we provide field 145 (NLEA-adjusted values) as a yes/no field, so that the user can designate whether or not a record consists of rounded (adjusted) values. This allows the use of this format to collect both rounded information taken from nutritional labels, as well as more precise information such as might be expected from laboratories.

The data exchange format contains fields to accommodate both the American Diabetic Association's Diabetic Exchange Values for Foods and the Canadian Diabetes Association's Food Choice Values. Healthcare practitioners believe that the provision of these exchange values will make a nutrient data set even more valuable, since it is often the exchange values, not the nutrient values, which are used in patient education.

There are a number of fields which do not have associated default food tag names, and these have been brought to the attention of both USDA and IFDA personnel. It is the recommendation of the committee that IFDA tag names be established for all food composition attributes that

might logically be exchanged between interested parties. It is expected that tag names will be established for these food attributes, and that these will be published in a future addendum to the current specification. The USDA is the designated authority on behalf of INFOODS to develop the tag names.

The data exchange format standard was developed with an eye toward future growth. Field number 215 provides the opportunity specify "Other Descriptor Information" which is not currently known or anticipated. The specifics of this descriptor information would be identified via a to-be-designated food tag name, which would appear on each field 215-type record. Field 215 provides "header information," while field number 998 provides a similar capability at the individual food component level. Other nutrient information with the associated food tag can be specified in a 998 record, eliminating the need for the standard to be modified each time a new nutrient or food composition value is identified as of interest to the foodservice community. Descriptor and nutrient information provided in fields 225 through 999 may also contain additional optional information or positional subfields within each logical record. These subfields are separated by asterisks, the same way fields are separated in EDI-formatted records, and need only be specified when the information for a specific nutrient differs from the information specified in the record descriptor (i.e., fields 115, 120, 150, 155, 180, and 185). These sub-field values can override the corresponding field values specified in the header, on a field-by-field basis.

The optional subfields which can be overridden are as follows:

1. Food tag override, including tag names, key words, and other values
2. Date of information change
3. Reason for change, i.e., new product, reformulation, updated data.
4. Source Code, i.e., analytical, calculated, USDA
5. Basis (as purchases or as served/consumed)
6. Laboratory Code
7. IFDA data validation level
8. Number in sample
9. Standard deviation of sample

The IFDA data validation level is a two-digit numeric code that will eventually be tied into a hierarchical data quality scheme that will be developed jointly by IFDA and USDA, to provide quality assurance over data which is exchanged using the IFDA format.

There is a variety of other information available in the N-record, and I encourage those of you who are interested in learning more about the IFDA Product Data Exchange Format to contact IFDA's headquarters at 201 Park Washington Court, Falls Church, VA 22046, (703) 532-9400, to obtain a copy of the standard.

Our committee took the best of the capabilities of the INFOODS Data Interchange Standard, and incorporated them into what is now Version 3.0 of the IFDA Product Data Exchange Format. Illustration 1 includes an outline of Version 3.0 of this format, for your review. The IFDA Technical Standards Committee meets regularly, and we welcome any input you may have regarding changes that could be made to bring the standard into better conformity with your needs, or those of your customers.

<PROCNA> protein, total; calculated from amino nitrogen
Unit: g
Comments: Two pieces of data are associated with the tagname <PROCNA>. The first is the quantity of total protein and the second is the conversion factor used to calculate total protein from amino nitrogen.
Note: The total protein found in food tables is rarely calculated from amino nitrogen. <PROCNT> is the appropriate tagname for total protein in most cases.

<PROCNP> protein, total; calculated from protein nitrogen
Unit: g
Comments: Two pieces of data are associated with the tagname <PROCNP>. The first is the quantity of total protein and the second is the conversion factor used to calculate total protein from protein nitrogen.
Note: The total protein found in food tables is rarely calculated from protein nitrogen. <PROCNT> is the appropriate tagname for total protein in most cases.

<PROCNT> protein, total; calculated from total nitrogen
Unit: g
Comments: Three pieces of data are associated with the tagname <PROCNT>. The first is the quantity of total protein; the second is a keyword which identifies the source of the conversion factor used to calculate the total protein from total nitrogen; and the third is the actual conversion factor used. If possible, all three pieces of data should be included with <PROCNT>. However, it is acceptable to include only the keyword *or* the conversion factor (rather than both) with the total protein value if one or the other is unknown. If the conversion factor used was generated from a source other than one of those identified by the available keywords, the conversion factor should be listed without any keyword information.
Keywords: Following are the available keywords that can be used as the second value for the <PROCNT> tagname;
JONES conversion factor originally derived by Jones (7)
Tables: EGP, NE, EA
FAO conversion factor from a table in the FAO Nutritional Studies No 24 (4), reprinted in the World Health Organization Technical Report Series No. 522(3)
Tables: MW, DAN
USDA conversion factor from a table in the United States Department of Agriculture Handbook No. 8 (12)
Tables: USDA 203
STD standard conversion factor of 6.25, not specific for the type of food. (If this keyword is used, the 6.25 conversion factor should *not* be listed with the secondary tagname <XN>.)
Tables: SFK, IND, PRC

The following secondary tagname may be used to identify the specific conversion factor used when a keyword other than STD is present, or instead of a keyword (see above).

<XN> conversion factor for calculating total protein from total nitrogen

Examples: The 3.2 g/100 g of protein in cow's milk which is listed in the Nutritive Value of Indian Foods was calculated from total nitrogen using the 6.25 conversion factor. Therefore, the protein value would be listed using the <PROCNT> tagname and the STD keyword:

<PROCNT> 3.2 STD </PROCNT>

The 3.3 g/100 g of protein in cow's milk which is listed in McCance and Widdowson was calculated from total nitrogen using a 6.38 conversion factor. This factor was obtained from the FAO publication. Therefore, the protein value would be listed using the <PROCNT> tagname, FAO keyword, and the <XN> secondary tagname:

<PROCNT> 3.3 FAO <XN> 6.38 </PROCNT>

As a hypothetical example, if a value of 0.3 g/100 g of protein in watermelon seeds were calculated from total nitrogen using the conversion factor 5.30, and this value had not been taken from one of the tables identified by the list of keywords, the protein value would be listed using the <PROCNT> tagname in the following manner:

<PROCNT> 0.3 <XN> 5.30 </PROCNT>

Note: In these examples, </PROCNT> is an end-tag required in interchange format to indicate the end of the information about protein calculated from total nitrogen. See the *INFOODS Data Interchange Handbook* for details on interchange format.

<PRO-> protein, total; method of determination unknown

Unit: g

Comments: The <PRO-> tagname should be used for a total protein value when it is not known whether the value was the result of a direct analysis or whether it was calculated from total nitrogen, protein nitrogen, or amino nitrogen. The <PRO-> tagname should also be used if it is known that the total protein value was calculated from one of the nitrogen components, but the conversion factor used in the calculation is unknown. (It is meaningless to have <PRO-> in combination with either <PROCNA>, <PROCNP>, or <PROCNT> for a given food item.)

Field Type	Field Nmbr	Default Food Tag Name	Field Description	Field Size	IFDA RDS	MDS	Unit of Measure
Descriptor	100		Shipping UPC Code	A 14	Y	Y	
Descriptor	105		Unit UPC Code	A 12	Y	Y	
Descriptor	110		Manufacturer Product Number	A 14	Y	Y	
Descriptor	115		Date of Change or Product Introduction, as YYYYMMDD	N 8	Y		
Descriptor	120		Reason for Change (N=New, R=Reformulated,U=Updated)	A 1	Y		
Descriptor	125		Short Name	A 40	Y	Y	
Descriptor	130		Long Name	A 76			
Descriptor	135		Langual Name - variable length, comma-delimited field	A			
Descriptor	137		Product is produced specifically for Child Nutrition Program	A 1	Y		Y/N
Descriptor	140		Child Nutrition Label Number	N 6	Y		
Descriptor	145		NLEA Adjusted Values	A 1	Y	Y	Y/N
Descriptor	150		A=Analytical; U=USDA Data; C=Calculated=Default	A 1	Y	Y	
Descriptor	155		C=As Served/Consumed; P=As Purchased=Default	A 1	Y	Y	
Descriptor	165		USDA Nutrient Database Release Number	N 2.2	Y		
Descriptor	170		USDA Nutrient Database Code Number	N 10	Y		
Descriptor	175		IMP Specification	N 8			
Descriptor	180		Laboratory Code	N 8	Y		
Descriptor	185		IFDA Data Validation Level (0 through 99)	N 2	Y		
Descriptor	190		Weight Density (Specific Gravity - liquids only)	N 1.4	Y	Y	
Descriptor	195		Household Unit of Measure	A 8	Y		
Descriptor	200		Number of household measures in a serving	N 5.2	Y		
Descriptor	205		Weight of a serving in grams	N 5.2	Y		gm
Descriptor	210		Refuse Percentage	N 7.3			%
Descriptor	215		Other descriptor information				depends
Energy	225	ENERC/UNIT	Energy (in Kcal)	N 7.3	Y	Y	Kcal
Energy	230	ENERC	Energy (in kJ)	N 7.3			Kj
Energy	235	ENERPF	Calories from fat	N 7.3	Y	Y	%
Proximate	240	WATER	Water (Moisture)	N 7.3	Y	Y	gm
Proximate	245	CHOCDF	Carbohydrate,total	N 7.3	Y	Y	gm
Proximate	250	PROCNT	Protein,total	N 7.3	Y	Y	gm
Proximate	255	FAT	Fat,total (total lipid)	N 7.3	Y	Y	gm
Proximate	260	ASH	Ash	N 7.3	Y	Y	gm
Carbohydrate	270		Complex Carbohydrate	N 7.3	Y	Y	gm
Carbohydrate	275	FIBTG	Fiber,total dietary (TDF)	N 7.3	Y	Y	gm
Carbohydrate	280	FIBINS	Fiber,water-insoluble	N 7.3			gm
Carbohydrate	285	FIBSOL	Fiber,water-soluble	N 7.3			gm
Carbohydrate	290	FRUS	Fructose	N 7.3			gm
Carbohydrate	295	GALS	Galactose	N 7.3			gm
Carbohydrate	300	GLUS	Glucose	N 7.3			mg
Carbohydrate	305	MALS	Maltose	N 7.3			gm
Carbohydrate	310	MANTL	Mannitol	N 7.3			mg
Carbohydrate	315	PECT	Pectin	N 7.3			gm
Carbohydrate	320	SORTL	Sorbitol	N 7.3			mg
Carbohydrate	325	STARCH	Starch,total	N 7.3			gm
Carbohydrate	330	SUCS	Sucrose	N 7.3			gm
Carbohydrate	335	SUGAR	Sugars,total	N 7.3	Y	Y	gm
Carbohydrate	335	XYLTL	Xylitol	N 7.3	Y		mg

Field Type	Field Nmbr	Default Food Tag Name	Field Description	Field Size	IFDA RDS	MDS	Unit of Measure
Lipid	350	SITSTR	Beta-sitosterol	N 7.3			gm
Lipid	355	CHOLC	Cholesterol	N 7.3	Y	Y	mg
Lipid	360	CAMD5	Delta 5-campesterol	N 7.3			gm
Lipid	365	STID7	Delta 7-stigmasterol	N 7.3			mg
Lipid	370		Fat Replacements	A 1			Y/N
Lipid	375	PHYSTR	Phytosterol,total	N 7.3	Y		mg
Amino Acid	385	ALA	Alanine	N 7.3			mg
Amino Acid	387	ARG	Arginine	N 7.3			mg
Amino Acid	389	ASP	Aspartic Acid	N 7.3			mg
Amino Acid	391	CYS	Cystine	N 7.3			mg
Amino Acid	393	GLU	Glutamic Acid (Glutamate)	N 7.3			mg
Amino Acid	395	GLY	Glycine	N 7.3			mg
Amino Acid	397	HIS	Histidine	N 7.3			mg
Amino Acid	399	ILE	Isoleucine	N 7.3			mg
Amino Acid	401	LEU	Leucine	N 7.3			mg
Amino Acid	403	LYS	Lysine	N 7.3			mg
Amino Acid	405	MET	Methionine	N 7.3			mg
Amino Acid	407	PHE	Phenylalanine	N 7.3	Y	Y	mg
Amino Acid	409	PRO	Proline	N 7.3			mg
Amino Acid	411	SER	Serine	N 7.3			mg
Amino Acid	413	THR	Threonine	N 7.3			mg
Amino Acid	415	TRP	Tryptophan	N 7.3			mg
Amino Acid	417	TYR	Tyrosine	N 7.3			mg
Amino Acid	419	VAL	Valine	N 7.3			mcg
Saturated Fatty Acid	480	FASAT	Fatty acids,total saturated	N 7.3	Y	Y	gm
Saturated Fatty Acid	485	F4D0	4:0 (Butyric or butanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	490	F6D0	6:0 (Caprioc or hexanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	495	F8D0	8:0(Caprylic or octanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	500	F10D0	10:0(Capric or Decanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	505	F12D0	12:0(Lauric or dodecanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	510	F14D0	14:0(Myristic or tetradecanoic acid)	N 7.3	Y		gm
Saturated Fatty Acid	515	F15D0	15:0(Pentadecylic acid)	N 7.3	Y		gm
Saturated Fatty Acid	520	F16D0	16:0(Palmitic acid)	N 7.3	Y		gm
Saturated Fatty Acid	525	F17D0	17:0(Margaric acid)	N 7.3	Y		gm
Saturated Fatty Acid	530	F18D0	18:0(Stearic acid)	N 7.3	Y		gm
Saturated Fatty Acid	535	F20D0	20:0(Arachidic acid)	N 7.3	Y		gm
Saturated Fatty Acid	540	F22D0	22:0(Behenic acid)	N 7.3	Y		gm
Saturated Fatty Acid	545	F24D0	24:0(Lignoceric acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	555	FAMS	Fatty acids,total monounsaturated	N 7.3	Y		gm
Monounsaturated Fatty Acid	560	F14D1	14:1(Myristoleic acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	565	F16D1	16.1(Palmitoleic acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	570	F18D1TN9	18:1t (Elaidic acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	575	F18D1	18:1(Oleic acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	580	F20D1	20:1(Gadoleic acid)	N 7.3	Y		gm
Monounsaturated Fatty Acid	585	F22D1	22:1(Erucic acid)	N 7.3	Y		gm

Field Type	Field Nmbr	Default Food Tag Name	Field Description	Field Size	IFDA RDS	MDS	Unit of Measure
Polyunsaturated Fatty Acid	595	FAPU	Fatty acids,total polyunsaturated	N 7.3	Y	Y	gm
Polyunsaturated Fatty Acid	600	F18D2CN6	18:2cc n-6 Linoleic Acid	N 7.3	Y		gm
Polyunsaturated Fatty Acid	605		18:2cc not n-6 (Gamma-linoleic Acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	610		18:2tc	N 7.3	Y		gm
Polyunsaturated Fatty Acid	615		18:2tt	N 7.3	Y		gm
Polyunsaturated Fatty Acid	620	F18D3N6	18:3 not n-3 (Gamma-linolenic acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	625	F18D3N3	18:3n-3(Alpha-linolenic acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	630	F18D4	18:4(Parinaric acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	635	F20D4	20:4(Arachidonic acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	640	F20D5	20:5(Eicosapentaenoic acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	645	F22D5	22:5(Docosapentaenoic acid)	N 7.3	Y		gm
Polyunsaturated Fatty Acid	650	F22D6	22:6(Docosahexaenoic acid)	N 7.3			gm
Mineral	660	CA	Calcium	N 7.3	Y	Y	mg
Mineral	665	CLD	Chloride (Chlorine)	N 7.3			mg
Mineral	670	CR	Chromium	N 7.3			mcg
Mineral	675	CU	Copper	N 7.3	Y		mg
Mineral	680	FD	Fluoride (Fluorine)	N 7.3			mcg
Mineral	685	ID	Iodide (Iodine)	N 7.3	Y		mcg
Mineral	690	FE	Iron,total	N 7.3	Y	Y	mg
Mineral	695	MG	Magnesium	N 7.3	Y		mg
Mineral	700	MN	Manganese	N 7.3	Y		mg
Mineral	705	MO	Molybdenum	N 7.3			mcg
Mineral	710	P	Phosphorus	N 7.3	Y		mg
Mineral	715	K	Potassium	N 7.3	Y		mg
Mineral	720	SE	Selenium,total	N 7.3			mcg
Mineral	725	NA	Sodium	N 7.3	Y	Y	mg
Mineral	730	ZN	Zinc	N 7.3	Y		mg
Vitamin	740	BIOT	Biotin (Vitamin H)	N 7.3			mcg
Vitamin	745	FOL	Folate (Folacin or folic acid)	N 7.3	Y		mcg
Vitamin	750	NIA	Niacin,preformed	N 7.3	Y		mg
Vitamin	755	PANTAC	Pantothenic Acid (Vitamin B-5)	N 7.3	Y		mg
Vitamin	760	RIBF	Riboflavin (Vitamin B-2)	N 7.3	Y		mg
Vitamin	765	THIA	Thiamin (Vitamin B-1)	N 7.3	Y		mg
Vitamin	770	VITAA	Vitamin A (determined by bioassay)	N 7.3	Y	Y	IU
Vitamin	775	VITA	Vitamin A (Calculated by summation)	N 7.3			mcg
Vitamin	780	RETOL	Retinol (Vitamin A Preformed)	N 7.3	Y		mcg
Vitamin	785	CARTA	Alpha-carotene	N 7.3			mcg
Vitamin	790	CARTB	Beta-carotene	N 7.3	Y		mcg
Vitamin	795	CRYPX	Cryptoxanthin	N 7.3			mcg
Vitamin	800		Lutein	N 7.3			mcg
Vitamin	805		Lycopene	N 7.3			mcg
Vitamin	810	VITB12	Vitamin B-12 (Cobalamin)	N 7.3	Y		mcg
Vitamin	815	VITB6A	Vitamin B-6	N 7.3	Y		mg
Vitamin	820	VITC	Vitamin C - Total (Ascorbic acid)	N 7.3	Y	Y	mg
Vitamin	825		Vitamin C - Reduced	N 7.3	Y		mg
Vitamin	830	ASCDL	L-dehydroascorbic Acid	N 7.3			mg
Vitamin	835	VITD	Vitamin D (Calciferol)	N 7.3	Y		mcg
Vitamin	840	VITE	Vitamin E (Alpha-tocopherol equivalents)	N 7.3	Y		mg
Vitamin	845	TOCPHA	Alpha Tocopherol	N 7.3			mg
Vitamin	850	TOCPHB	Beta-Tocopherol	N 7.3			mg
Vitamin	855	TOCPHG	Gamma-Tocopherol	N 7.3			mg
Vitamin	855		Tocotrienol	N 7.3			mg
Vitamin	860	VITK	Vitamin K	N 7.3	Y		mcg

Field Type	Field Nmbr	Default Food Tag Name	Field Description	Field Size	IFDA RDS	MDS	Unit of Measure
Food Additives or Allergens	865		Aspartame	A 1	Y	Y	Y/N
Food Additives or Allergens	870	CAFFN	Caffeine	N 7.3	Y	Y	mg
Food Additives or Allergens	875	CASN	Casein	N 7.3			mg
Food Additives or Allergens	880		Egg	A 1	Y		Y/N
Food Additives or Allergens	883		Enriched or Fortified	A 1	Y		Y/N
Food Additives or Allergens	885		Erythrosine	A 1	Y		Y/N
Food Additives or Allergens	890	GLUTN	Gluten	N 7.3	Y		mg
Food Additives or Allergens	895		Hydrolized Vegetable Protein (HVP)	A 1	Y	Y	Y/N
Food Additives or Allergens	900	LACS	Lactose	N 7.3	Y		gm
Food Additives or Allergens	905		MSG	A 1	Y	Y	Y/N
Food Additives or Allergens	910	NITRA	Nitrates	N 7.3	Y		mg
Food Additives or Allergens	915		Saccharin	A 1	Y	Y	Y/N
Food Additives or Allergens	920		Sulfites	A 1	Y		Y/N
Food Additives or Allergens	925		Tartrazine	A 1	Y		Y/N
Food Additives or Allergens	930	THEBRN	Theobromine	N 7.3	Y		mg
Food Additives or Allergens	935		Theophylline	A 1	Y		Y/N
Food Additives or Allergens	940		Tyramine	N 7.3			mcg
Food Additives or Allergens	945		Vegetable Protein	N 7.3			gm
Diabetic Exchange - ADA (1995)	950		Carbohydrate Group - Starch	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	952		Carbohydrate Group - Fruit	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	954		Carbohydrate Group - Milk, Skim	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	956		Carbohydrate Group - Milk, Low-fat	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	958		Carbohydrate Group - Milk, Whole	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	960		Carbohydrate Group - Other Carbohydrates	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	962		Carbohydrate Group - Vegetables	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	964		Meat and Meat Substitute Group - Very Lean	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	965		Meat and Meat Substitute Group - Lean	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	966		Meat and Meat Substitute Group - Medium-fat	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	967		Meat and Meat Substitute Group - High-fat	N 7.3	Y		Exch
Diabetic Exchange - ADA (1995)	968		Fat Group	N 7.3	Y		Exch
Food Choice Values - CDA	970		Fat and Oil Choice - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	972		Fruits and Vegetables Choice - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	974		Protein Choice (Lean) - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	976		Milk Choice (2%) - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	978		Milk Choice (1%) - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	980		Milk Choice (Skim) - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	982		Milk Choice (Whole) - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	984		Sugar Choice - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	986		Starch Choice - CDA	N 7.3	Y		Choice
Food Choice Values - CDA	988		Extras Choice - CDA	N 7.3	Y		Choice
Miscellaneous	990	ALC	Alcohol (Ethanol)	N 7.3	Y	Y	gm
Miscellaneous	992	NT	Total Nitrogen	N 7.3	Y		gm
Miscellaneous	994		Vegetable Protein Product	A 1	Y		Y/N
Miscellaneous	998	(Required)	Other Nutrient Information, with associated food tag				depends