

USDA Branded Food Products Database (BFPD)

Documentation and Download User Guide

Released August 2018

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Agricultural Research Service
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Brief Description

The USDA Branded Food Products Database (BFPD) was created by a Public-Private Partnership, with support from staff members of the Nutrient Data Laboratory, Beltsville Human Nutrition Research Center, Agricultural Research Service, US Department of Agriculture.

Information in the BFPD is received from a number of food industry data providers, and these organizations are therefore responsible for the data. USDA supports the BFPD by standardizing the presentation of the data.

The data in the preliminary BFPD download file are current as of July 13, 2018. They will not be updated until the end of 2018. Therefore, the data in this download will not reflect any changes made to the online database application and API between August and December 2018.

Suggested Citation

US Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA Branded Food Products Database. Version Current: July 2018. Internet: <http://www.ars.usda.gov/nutrientdata>

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Issued August 2018

Introducing the Branded Food Products Database

The USDA Branded Food Products Database (BFPD) is the result of a Public-Private Partnership, whose goal is to enhance public health and the open sharing of nutrient composition of branded and private label foods provided by the food industry. Members of the Public-Private Partnership are:

- Agricultural Research Service (ARS), USDA (www.ars.usda.gov)
- International Life Sciences Institute ILSI North America (www.ilsina.org)
- GS1 US (www.gs1us.org)
- 1WorldSync (www.1worldsync.com)
- Label Insight (www.labelinsight.com)
- University of Maryland, Joint Institute for Food Safety and Applied Nutrition (jifsan.umd.edu)

The BFPD, which is hosted by USDA's National Agricultural Library, is searchable online at <https://ndb.nal.usda.gov>.

This Documentation describes the BFPD and provides the download files. The data in the BFPD download files are current as of July 13, 2018. They will not be updated until the end of 2018. Therefore, the data in the download files will not reflect any changes that are made to the online BFPD database between July 13, 2018 and December 2018.

BFPD Partner Roles

Companies submit product data either to Label Insight or 1WorldSync through the Global Data Synchronization Network. The food industry organizations who supply the data—the data providers—are responsible for descriptions, nutrient data, serving size, and ingredient information supplied for the BFPD. The submission of data to the BFPD is voluntary. However, if a manufacturer or retailer participates, certain mandatory information and data, agreed upon by the Partners, must be submitted.

USDA standardizes the reported values by calculating nutrient values per 100 grams from those values provided per serving, which are taken from the Nutrition Facts Panel of the product.

Standardizing and Presenting BFPD Data

Once the data providers submit the data, the University of Maryland's Joint Institute for Food Safety and Applied Nutrition, in collaboration with the USDA, reformats and standardizes the data so that the data presentations are consistent across the USDA Food Composition Databases:

- Data are converted to a 100-unit basis, either gram (g) or milliliter (ml), depending on which was received from the data provider.
 - When a nutrient’s measured value is provided, that value is used to calculate the 100-unit basis.
 - If only a Percent Daily Value (%DV) is provided, the 100-unit value is calculated using %DV from FDA’s Food Labeling Guide as published in 1994 and last revised in 2013 (<https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm2006828.htm>).
 - With the changes to the Nutrition Facts Panel published in May 2016 and effective January 2020, and already appearing on labels in stores, the manufactures will provide nutrient values per serving in addition to %DV. The nutrient values per serving will be used to calculate values on a 100-unit basis and %DV will be not be used.
- Information on the method of calculation is available in the application program interface (API) or downloadable version. The derivation codes provide more context on how the conversion to a 100-gram or 100-milliliter was performed for each nutrient (see sections below).

Interpreting Missing Data and Zero Values in BFPD

- In some cases, values for particular nutrients are missing. This does not indicate a zero value. It means only that that the data were not supplied by the data provider.
- BFPD values may differ from those obtained through analytical measurements because of label rounding, which is permitted by Nutrition Labeling Education Act (NLEA) regulations. This may be an issue, especially with food products that have small serving sizes. Label rounding may introduce additional variability in the 100 g or 100 ml values.

When label rounding results in a reported nutrient value of zero, the value on the 100 g or 100 ml basis will also be zero. However, reportable amounts of the particular nutrient in the food may be found through analysis.

Application Program Interface (API)

An API is available that developers can use to access the database with their own applications and be assured that they are linking to the most up-to-date version of the database. Details on using the API are provided on the USDA food composition databases search site at <http://ndb.nal.usda.gov/ndb/doc/index>.

Downloadable Files

The preliminary data files for the BFPD are accessible from the “Download” tab on the online search website at <http://ndb.nal.usda.gov>.

The download files are available both as a CSV delimited ASCII file and as a Microsoft Access database. The Access database contains all of the BFPD files and relationships, with a few sample queries and reports. The Microsoft Access files are compatible with later releases of the same software package and are generally compatible with other software packages released at the same time.

File Formats

The database contains four files: the Products file; the Nutrient file; the Data Derivation Code Description file; and the Serving Size file.

Products File

Table 1. Products File Format

Field name	Description
NDB_No	8-digit Nutrient Database Number (NDB) that uniquely identifies a food item. Links to the Nutrient file and the Serving Size file.
Long_Name	200-character description of food item
Data_Source	A code designating the source of the data: GDSN = Global Data Synchronization Network via 1WorldSync LI = Label Insight
GTIN_UPC	A unique code identifying a specific product: UPC = Universal Product Code GTIN = Global Trade Item Number
Manufacturer	The company that manufactured the product
Date_Modified	Date when the food record was last updated by the data provider
Date_Available	Date when the food record was made available for inclusion in the database
Ingredients	Ingredients of the product

Nutrient File

Table 2. Nutrient File

Field name	Description
NDB_No	8-digit Nutrient Database number that uniquely identifies a food item. Links to the Products file and the Serving Size file.
Nutrient_Code	Unique 3-digit identifier code for a nutrient
Nutrient_Name	Name of nutrient/food component
Derivation_Code	A code indicating how the Output_Value was determined. The codes used are defined in the Derivation Code Description file
Output_Value	Amount in 100 g, edible portion. This value is calculated from the amount per serving value on the Nutrition Facts Panel supplied by the data provider
Output_UOM	Units of measure for the Output Value

Derivations Code Description File

Table 3. Derivation Code Description File

Field name	Description
Derivation_Code	A code indicating how the Output Value was determined. Links to the Nutrient file.
Derivation_Code_ Description	Description of the derivation code

Serving Size File

Table 4. Serving Size File

Field name	Description
NDB_No	8-digit Nutrient Database number that uniquely identifies a food item. Links to the Products file and the Serving Size file.
Serving_Size	Weight of the specified serving

Field name	Description
Serving_Size_UOM	Unit of Measure for the serving size g: Serving size reported in grams m: Serving size reported in milliliters
Household_Serving	The amount of the Household_Serving_Size_UOM, i.e., the number of cups, tablespoons, teaspoons in a serving. May be a fraction, such as 0.25 or 0.50.
Household_Serving_Size_UOM	The Units of Measure for the Household Serving, i.e., cup, tablespoon, teaspoon.
Preparation_State	Indicates if the information from the Nutrition Facts Panel is for the prepared or unprepared food. Only included if supplied.