

**Composition of Foods**  
**Raw, Processed, Prepared**  
USDA National Nutrient Database for Standard  
Reference, Release 16-1

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## Introduction

The USDA National Nutrient Database for Standard Reference (SR) is the major source of food composition data in the United States. It provides the foundation for most public and private sector databases. As information is updated, new versions of the database are released.

This version, Release 16-1 (SR16-1) contains nutrient data for 6,661 food items for up to 125 food components, such as vitamins, minerals and fatty acids. It replaces SR16, issued July, 2003 and represents a minor revision of that database. Most of the data in SR16 can still be considered current and accurate. However, SR 16-1 contains updated information for 280 nutrient values. The changes made to the database since SR16 are limited to changes in the nutrient file.

Full documentation describing the database is the same as that for SR16.

## Description of Specific Changes

The changes made to the nutrient file of the database since the last release pertain to the 52 foods listed in Table 1.

Nutrients in whole, reduced fat, lowfat, and nonfat milks were updated in SR16. Results for additional analyses were received and the mineral values for these milk items have been changed.

Alpha-tocopherol in 27 fortified breakfast cereals, three meal replacement items, and two fortified peanut butters were updated based on additional information about the form of vitamin E added to foods. In the new Dietary Reference Intakes for Vitamin E (NAS/IOM 2000) there are different factors to be used to calculate the milligram amount of  $\alpha$ -tocopherol from IU of vitamin E. The factor varies depending upon the chemical form of  $\alpha$ -tocopherol used to fortify the food.

mg of alpha-tocopherol in food, fortified food or multivitamin  
= IU of the RRR-alpha-tocopherol compound X 0.67

= IU of the *all rac*-alpha-tocopherol compound X 0.45

In previous releases, the conversion factor for RRR-alpha-tocopherol was used for all vitamin E fortified foods. New alpha-tocopherol values have been calculated for breakfast cereals and a few other foods where we have confirmed that *all rac*-alpha-tocopherol was used. For more information about the vitamin E in breakfast cereals see the article in the January, 2004 issue of the American Journal of Clinical Nutrition by Leonard et. al. An article in the January, 2004 issue of the American Journal of Clinical Nutrition stated that synthetic *all rac*-alpha-tocopherol is the form used to routinely fortify breakfast cereals (Leonard et al. 2004). Alpha tocopherol values for infant formulas fortified with vitamin E have not been recalculated at this time because we are verifying the type of vitamin E that is added by the companies.

Various nutrients for the other foods in the table have been updated in this release.

Table 1. Foods Containing Nutrient Updates for SR16-1

<b>NDB N</b>	<b>Desc</b>
01001	Butter, salted
01077	Milk, whole, 3.25% milkfat
01079	Milk, reduced fat, fluid, 2% milkfat, with added vitamin A
01082	Milk, lowfat, fluid, 1% milkfat, with added vitamin A
01085	Milk, nonfat, fluid, with added vitamin A (fat free or skim)
05139	Duck, domesticated, meat and skin, raw
06559	Soup, tomato, canned, prepared with equal volume water, commercial
07070	Salami, cooked, turkey
07079	Turkey breast meat
07220	Oscar Mayer, Liver Cheese, pork fat wrapped
08028	Cereals ready-to-eat, KELLOGG, KELLOGG'S Complete Wheat Bran
08047	Cereals ready-to-eat, QUAKER, KING VITAMAN
08058	Cereals ready-to-eat, KELLOGG, KELLOGG'S PRODUCT 19
08067	Cereals ready-to-eat, KELLOGG, KELLOGG'S SPECIAL K
08077	Cereals ready-to-eat, GENERAL MILLS, Whole Grain TOTAL
08085	Cereals ready-to-eat, QUAKER, KRETSCHMER Honey Crunch Wheat
08087	Cereals ready-to-eat, GENERAL MILLS, Multi-Grain Cheerios
08124	Cereals, QUAKER, Instant Oatmeal, apples and cinnamon, dry
08125	Cereals, QUAKER, Instant Oatmeal, apples and cinnamon, prepared with
08195	Cereals ready-to-eat, HEALTHY CHOICE, KELLOGG'S Almond Crunch
08214	Cereals ready-to-eat, QUAKER, QUAKER OATMEAL SQUARES
08215	Cereals ready-to-eat, QUAKER, QUAKER CINNAMON OATMEAL
08216	Cereals ready-to-eat, QUAKER, QUAKER Oat Bran Cereal
08219	Cereals ready-to-eat, QUAKER, Honey Nut Heaven
08242	Cereals ready-to-eat, JUST RIGHT with Crunchy Nuggets
08246	Cereals ready-to-eat, GENERAL MILLS, TOTAL Corn Flakes
08247	Cereals ready-to-eat, GENERAL MILLS, TOTAL Raisin Bran
08258	Cereals ready-to-eat, KELLOGG, KELLOGG'S Complete Oat Bran Flakes
08283	Cereals ready-to-eat, KELLOGG, KELLOGG'S JUST RIGHT Fruit & Nut
08284	Cereals ready-to-eat, KELLOGG, KELLOGG'S Low Fat Granola with
08286	Cereals ready-to-eat, KELLOGG, KELLOGG'S MUESLIX
08318	Cereals ready-to-eat, KELLOGG, KELLOGG'S SMART START Cereal
08398	Cereals ready-to-eat, GENERAL MILLS, HARMONY
08420	Cereals, QUAKER, Instant Oatmeal, NUTRITION FOR WOMEN, Vanilla Cinnamon, dry
08421	Cereals, QUAKER, Instant Oatmeal, NUTRITION FOR WOMEN, Golden Brown Sugar, dry
08422	Cereals, QUAKER, Instant Oatmeal, NUTRITION FOR WOMEN, Apple Spice, dry

08431	Cereals, QUAKER Instant Oatmeal, NUTRITION FOR WOMEN, Vanilla Cinnamon, prepared with boiling water
08432	Cereals, QUAKER, Instant Oatmeal, NUTRION FOR WOMEN, Golden Brown Sugar, prepared with boiling water
08433	Cereals, QUAKER, Instant Oatmeal, NUTRITION FOR WOMEN, Apple Spice, prepared with boiling water
11508	Sweetpotato, cooked, baked in skin, without salt
11578	Vegetable juice cocktail, canned
11734	Beets, cooked, boiled, drained, with salt
11857	Squash, summer, all varieties, cooked, boiled, drained, with salt
14003	Alcoholic beverage, beer, regular
16155	Peanut butter, smooth, vitamin and mineral fortified
16156	Peanut butter, chunky, vitamin and mineral fortified
19095	Ice creams, vanilla
19104	Candies, fudge, vanilla with nuts
21024	Fast foods, french toast sticks
43205	Beverage, instant breakfast powder, chocolate, not reconstituted
43260	Beverage, instant breakfast powder, chocolate, sugar-free, not
43528	Ensure plus, liquid nutrition

The Nutrient Data File (file name = NUT\_DATA) has been updated with SR16-1. All other files are unchanged from SR16, but are provided in the SR16-1 release for the user's convenience.

## Update Files

These files provide changes made between SR16 (2003) and SR16-1 (2004). Update files in ASCII are provided for those users who reformatted previous releases for their systems and wish to do their own updates. If you are using an earlier release, you will need to first obtain the update files for that release through SR16, update your database to SR16, then use the update files for SR16-1. These updates are available on NDL's Web site:  
<http://www.nal.usda.gov/fnic/foodcomp>.

There is one file containing the changes made since SR16 (2003). CHG\_NUTR contains changes to the following fields: nutrient values, standard errors, number of data points, source code, and data derivation code. It is in the same format as the Nutrient Data file. No other files were changed in this release, nor are there any added or deleted items.

Update files in ASCII are also provided for the Abbreviated file. The CHG\_ABBR file contains records for food items where a nutrient value has changed since SR16. This file is in the same format as the Abbreviated file. There are no added or deleted items in this release for the Abbreviated file.

## References

Leonard, S.W., C.K. Good, E.T. Gugger, and M.G. Traber. 2004. Vitamin E bioavailability from fortified breakfast cereal is greater than that from encapsulated supplements. *American Journal of Clinical Nutrition* 79: 86-92.

National Academy of Sciences, Institute of Medicine. 2000. Dietary reference intakes: Vitamin C, vitamin E, selenium, and carotenoids. National Academy Press, Washington, DC.