



Flavonoid Values for USDA Survey Foods and Beverages 2007-2010



The flavonoid database and associated data files described below expand the capacity for calculating nationally representative estimates of flavonoid intakes by people of all ages in the United States and linking flavonoid intakes with other health-related data.

- The ***Database of Flavonoid Values for USDA Food Codes 2007-2010*** provides flavonoid values for all foods/beverages in the USDA Food and Nutrient Database for Dietary Studies (FNDDS) versions 4.1 and 5.0. The FNDDS is the database of foods/beverages, their nutrient values, and weights for typical portions that is used to process data from What We Eat in America (WWEIA), the dietary intake component of the National Health and Nutrition Examination Survey (NHANES). Flavonoid values in the 2007-2010 database are based on the USDA's Expanded Flavonoid Database for the Assessment of Dietary Intakes 1.1.

The Flavonoid Database provides the amounts (mg/100 g) of 29 flavonoids (*see back of page*) in 6 flavonoid classes present in each food/beverage. Most (24) of the individual flavonoids in the database are monomers, the 4 theaflavins are dimers, and the thearubigins are polymers.

The Flavonoid Database is available in 3 formats – as a Microsoft Access® database, SAS® formatted files, or ASCII delimited text files. Each version is downloadable as a single self-extracting executable PKZip® data file that contains all three tables or data files (Main Food Descriptions, Flavonoid Values, and Flavonoid Descriptions).

- The ***Flavonoid Intake Data Files*** are the result of applying flavonoid values from the Flavonoid Database to day 1 and day 2 dietary data from WWEIA, NHANES 2007-2010. They are available in SAS® format and include:
 - For each food/beverage report, the amounts of each of the 29 individual flavonoids, total flavonoids (the sum of all 6 classes), total anthocyanidins, total flavan-3-ols, total flavanones, total flavones, total flavonols, total isoflavones, and total catechins (monomeric flavan-3-ols only).
 - For each respondent, the daily total intakes of the 29 individual flavonoids, total flavonoids (the sum of all 6 classes), total anthocyanidins, total flavan-3-ols, total flavanones, total flavones, total flavonols, total isoflavones, and total catechins (monomeric flavan-3-ols only).

Through the key identifiers, the flavonoid intake data may be analyzed together with the nutrients and dietary components already available from WWEIA and/or other NHANES data.

For more information about the Flavonoid Database and/or the Flavonoid Intake Data files, visit our web site:

www.ars.usda.gov/nea/bhnrc/fsrg

29 Individual Flavonoids in Flavonoid Database and Data Files

<u>Flavonoid class</u>	<u>Flavonoid</u>
<i>Anthocyanidins</i>	1 Cyanidin
	2 Delphinidin
	3 Malvidin
	4 Pelargonidin
	5 Peonidin
	6 Petunidin
<i>Flavan-3-ols</i>	7 (-)-Epicatechin*
	8 (-)-Epicatechin 3-gallate*
	9 (-)-Epigallocatechin*
	10 (-)-Epigallocatechin 3-gallate*
	11 (+)-Catechin*
	12 (+)-Gallocatechin*
	13 Theaflavin
	14 Theaflavin-3,3'-digallate
	15 Theaflavin-3'-gallate
	16 Theaflavin-3-gallate
	17 Thearubigins
<i>Flavanones</i>	18 Eriodictyol
	19 Hesperetin
	20 Naringenin
<i>Flavones</i>	21 Apigenin
	22 Luteolin
<i>Flavonols</i>	23 Isorhamnetin
	24 Kaempferol
	25 Myricetin
	26 Quercetin
<i>Isoflavones</i>	27 Daidzein
	28 Genistein
	29 Glycitein

* Included in "total catechins" category in the Flavonoid Database, data files, and data tables.

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