

# **USDA Database for the Flavonoid Content of Selected Foods**

## **Release 2**

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**August 2006**

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## **Documentation for the Update of the USDA Database for Flavonoid Content of Selected foods, Release 2 (2006)**

The scientific community continues to take interest in the types and levels of flavonoids in foods because of the consistent evidence regarding beneficial health effects of dietary flavonoids. Flavonoids, particularly flavan-3-ols and proanthocyanidins, have been associated with reduction in the risk of cardiovascular disease by increasing the release of endothelial nitric oxide (NO) and inducing vasodilatation. Anthocyanidins may also protect LDL cholesterol oxidation through their high antioxidant activity (Arab et al., 2005). Evidence supporting cancer prevention effects of flavonoids is limited and conflicting, but some organ-specific associations have been reported (Le Marchand, 2002; Nichenametla et al; 2006). A large volume of analytical data on food flavonoids has been published since the release of the first database, “USDA Database for the Flavonoid Content of Selected Foods”, in March 2003 on Nutrient Data Laboratory’s (NDL) Web site: <http://www.ars.usda.gov/nutrientdata>.

Since limited data existed for U.S. foods, plans to update and expand the database included the procurement and analysis of nationally representative samples of 59 fruits, vegetables, and nuts. This phase was completed through the USDA’s National Food and Nutrient Analysis Program (NFNAP). The Food Composition Laboratory (FCL) of the ARS/USDA analyzed these samples using a methodology developed by Merken et al. (2001) to analyze flavonoids in all five subclasses (flavonols, flavones, flavanones, flavan-3-ols, and anthocyanidins) simultaneously. New analytical data for anthocyanidins in U.S. fruits and vegetables were also provided by Wu and Prior of the Arkansas Children’s Nutrition Center/ARS (Wu et al. 2006), using NFNAP and other samples. The relevant articles published since 2002 were also retrieved and reviewed. One hundred and two new articles containing data on 26 selected commonly occurring compounds in the five subclasses of the dietary flavonoids were retained for critical evaluation of data quality. The USDA analytical data and other valid analytical data from both U.S. and international sources published from 2002 to early 2005 were merged with the data included in the first database from 2003. After review and statistical analysis, approximately 168 new foods have been added in the updated database. Values were added for additional compounds for some foods published in the earlier database.

The NDL had released a separate database, “USDA-Iowa State University Database on the Isoflavone Content of Foods” on its web site in 1999. Therefore isoflavones are not included in this database. Similarly proanthocyanidins are not included in this database as a separate database, “USDA Database for the Proanthocyanidin Content of Selected Foods” was released on NDL’s web site in August 2004.

### **Subclasses of flavonoids and selected compounds:**

- **FLAVONOLS:** Isorhamnetin, Kaempferol, Myricetin, Quercetin (Figure 1)
- **FLAVONES:** Apigenin, Luteolin (Figure 2)
- **FLAVANONES:** Eriodictyol, Hesperetin, Naringenin (Figure 3)
- **FLAVAN-3-OLS:** Catechins and gallic acid esters of catechins, Epicatechins and gallic acid esters of epicatechins, Theaflavins and gallic acid esters of theaflavins, Thearubigins (Figure 4 and 5)
- **ANTHOCYANIDINS:** Cyanidin, Delphinidin, Malvidin, Pelargonidin, Peonidin, Petunidin (Figure 6)

### **Procedures used to generate the Tabled Values**

Only those data generated by acceptable procedures are included. Acceptable procedures are defined as those which lead to good separation of flavonoid compounds (e.g., column chromatography or high-performance liquid chromatography [HPLC], capillary zone electrophoresis, micellar electrokinetic capillary chromatography). Studies that contained data generated by thin layer or paper chromatography, radioimmunoassay (RIA), pH differential methods or only spectrophotometric quantitation were not retained because of the lack of specificity of these methods. Similarly, values for total flavonoids or only the totals by subclass of flavonoids were not included, as the objective was to collect values for specific flavonoid compounds.

Most of the compounds in food are present in glycosylated forms except for the flavan-3-ols (catechins and theaflavins) which are present either in free forms or as gallic acid esters (e.g., in tea). However, many of the analytical procedures convert the glycosides into aglycones and thus results are reported as aglycones. Therefore, where the values for individual glycosides were determined, USDA scientists converted the glycoside values into aglycone forms using conversion factors based on molecular weight to make data consistent across the database. The catechins and epicatechins which were reported as gallic acid esters, such as epicatechin gallate, epigallocatechin gallate, etc., are included as such without any conversions.

Values in the database are reported as mg/100g of fresh weight of edible portion of food. Values for beverages were adjusted by their respective specific gravities and are reported as might be served (e.g., mg/100g). Analytical reports typically provided data for tea as infusions. The practice of brewing tea infusions varies in different countries and according to individual preferences. Therefore, it is difficult to compare flavonoid data for brewed teas obtained from different sources. Catechin and flavonol contents in tea infusions increased approximately in a linear way with the amount of tea leaves used for brewing. Therefore, all infusion values were standardized to 1% infusion (1g tea leaves/100ml boiling water). These values were calculated using the weight of the tea bag (or loose tea leaves) used to make the infusion. Adjustment for brewing time was not undertaken as a majority of tea flavonoids are extracted into the infusion after only short brewing times and do not increase substantially with extended brewing times (Arts et al., 2000; Hertog et al., 1993). Values for tea are given as mg/100g (100ml) of tea infusions

(as consumed). A separate table for flavonoids in dry tea (mg/100g of dry tea leaves), previously included in the 2003 release, is repeated here for the convenience of the user. For most of these entries, the values for dry teas were back-calculated from the values for tea infusions. There are no changes to this table in this release. This table will help in comparing the flavonoid content of different kinds of teas.

If a value was reported as “Trace”, that value was calculated by multiplying the LOQ (Limit Of Quantitation) by 0.71 (Mangels et al., 1993) if the LOQ was available. A zero value reported in the database is a true zero (below the limit of detection), indicating that authors attempted to measure the compound in that food and did not find it. The lack of a value for a particular flavonoid in a food in the database does not imply a zero value, but only that data were unavailable. The table of analytical values contains values for only those compounds and foods that were available in the literature at the time of this survey; it does not mean that other classes of compounds are not present in that particular food. For example, while pomegranates contain anthocyanidins, no values for anthocyanidins are listed in the table, as data for these compounds in pomegranate were not available. As mentioned earlier, values for total anthocyanidins, usually reported as the equivalent of only one standard used for quantitation (e.g., total anthocyanidins as cyanidin equivalents), are not used in the database because considerable discrepancy was observed in the values of the same food if the total was obtained by adding individual anthocyanidin values reported in other studies.

Considerable variation was observed in the flavonoid content in foods. Flavonoid compounds are often produced by plants in response to various environmental stresses. Stress may be caused by diseases, insects, climate, ultraviolet radiation, etc. (Dixon and Palva, 1995; Winkel-Shirley, 2002). Other sources of variability include cultivar, growing location, agricultural practices, processing and storage conditions, and preparation methods (Amiot et al., 1995; Häkkinen et al.; 2000, Patil et al., 1995; van der Sluis et al., 2001).

In this database, values for individual flavonoids in a particular food are taken from available acceptable references. Also, most of the values are based on a limited number of samples. This may account for the higher apparent variability in flavonoid content for some foods or flavonoids. However, more values were available for this release for a number of commonly consumed foods and lower variability was observed in some cases. More analyses would be needed to investigate the inherent variabilities in the flavonoid content of foods where observed variability of values in the database is large. Furthermore, users of the data should exercise caution when comparing flavonoid values for different forms of a food, such as for raw and cooked forms of the same food. As with any nutrient database, values for different forms of the food are collected from different sources. If a value in the cooked food is less than in the raw food, it does not necessarily mean that the particular flavonoid was reduced by cooking. This kind of comparison is valid only when paired raw and cooked samples are analyzed to estimate values for these forms.

## Data evaluation

The data were evaluated for quality using new procedures developed by scientists at the NDL as part of the new Nutrient Databank System (Holden et al., 2002). These procedures were based on criteria described earlier (Holden et al., 1987; and Mangels et al., 1993) with some modifications. Procedures developed for the 2003 database were followed (Holden et al., 2005). The five categories evaluated include: sampling plan, sample handling, number of samples, analytical method, and analytical quality control. NDL modified the criteria for the sampling plan rating at the aggregation stage to accommodate the international characteristic of this database. **For aggregated data which included data from countries other than the United States, the number of countries replaced the number of regions within a country.** The information presented in each reviewed paper was evaluated for each category, which then received a rating ranging from 0 to 20 points. The ratings for each of the five categories are summed to yield a quality index (QI) with the maximum possible score of 100 points. A confidence code (CC) is derived from the QI and is an indicator of the relative quality of the data and the reliability of a given mean. The CC is assigned as follows:

Table 1.—Confidence Codes

QI	CC
75-100	A
74-50	B
49-25	C
<25	D

The data were aggregated where possible to match the food descriptions in the USDA National Nutrient Database for Standard Reference (SR). Foods are arranged in alphabetical order and each food has a nutrient data bank (NDB) number (a five digit numerical code used in the SR) if they match to a food in SR. As the data came from various sources, both in the United States and other countries, there are a number of foods which are not included in the SR database. In these cases, a temporary NDB number was assigned. These numbers begin with “99” or “97” and are not unique to this table, as they may have been used in other special interest databases produced by NDL. Subsequently, the mean value (mg/100g), standard error of the mean (SEM), minimum (Min., and maximum (Max.) values were determined for each food and flavonoid. Mean values are weighted to account for the different number of samples among the various studies used. The weighted mean is, in turn, used to calculate the standard error based on the total number of samples in each aggregated food. These values, along with the CC and sources of data, are given in the table. The CC provides a relative indication of the quality of each estimate for food and specific compounds.

## Format of the tables

The USDA Database for the Flavonoid Content of Selected Foods is presented as a PDF file. A user will need the Adobe® Acrobat® reader to view the report of the database. For the convenience of the user, the flavonoid database is imported into a Microsoft®

Access database (flav02.mdb). This database follows the same structure as that used for SR. This will allow the user to use the database on his/her own computer with other programs.

### Flavonoid content of selected foods

This table contains values for individual flavonoid compounds for 392 foods. The fields in the Microsoft® Access database are as follows:

**Food Descriptions** (file name = FOOD\_DES). The Food Description table contains the descriptions of the food items. It links to the other tables in the flavonoid database through the NDB number. For those items in the SR<sup>1</sup> additional information (e.g., common names, and percentage and description of refuse) can be obtained by linking this table to the corresponding table in SR.

Table 2.—Food Description File Format

Field Name	Description
NDB No.	5-Digit Nutrient Databank number that uniquely identifies a food item. Foods in the USDA Flavonoids Database which do not have corresponding entries in the USDA National Nutrient Database for Standard Reference (SR) <sup>1</sup> are assigned NDB Nos. starting with either '99' or '97'.
FDGrp_Cd	4-digit code indicating food group to which the food item belongs.
Description	Food description. Scientific names are also provided for raw or unprocessed items.

<sup>1</sup> For more information on SR, see the NDL Web site (<http://www.ars.usda.gov/nutrientdata>) or contact the Nutrient Data Laboratory, 10300 Baltimore Avenue, Bldg. 005, Rm. 107, BARC-WEST, Beltsville, MD 20705. Tel. No. 301-504-0630, e-mail: ndlinfo@ba.ars.usda.gov.

**Flavonoid Data** (file name = FLAV\_DAT). The Flavonoid Data File contains the flavonoid values and information about the values, including statistical information, expert system ratings, and sources of data. It links to the Food Description File through the NDB. No. and to the Nutrient Definition file through the Nutrient Number.

Table 3.—Flavonoid Data Table.

Field Name	Description
NDB No.	5-Digit Nutrient Databank number.
Nutr_No	Unique 3-digit identifier code for a flavonoid.
Value	The flavonoid value (mg/100 g) edible portion.
SE	Standard error of the mean; null if could not be calculated.
N	Number of data points used in calculating the value and SE.

Min	Minimum value from data points used.
Max	Maximum value from data points used.
CC	Confidence Code, designated as A, B, C, or D. CC is a general indicator of the quality of the data (A=best). The procedure for determining CC is described in Holden et al., J. Food Comp. Anal. 15:339-348, 2002.
Data_Src	Sources of Data. The full citation for each data source can be found in the “Sources of Data” section.

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**Nutrient Definition** (file name = NUTR\_DEF). The Nutrient Definition file is a support file to the Nutrient Data file. It contains the nutrient number, flavonoid subclass, and description of the flavonoid. It links to the Nutrient Data file through the nutrient number.

Table 4.—Nutrient Definition Table.

Field Name	Description
Nutr_No	Unique 3-digit identifier code for a flavonoid.
Description	Name of the flavonoid.
Subclass	The flavonoid subclass to which the individual flavonoid belongs.

### Sources of Data

A complete list of the data sources from which the flavonoid values in the database were obtained is provided and corresponds to the “Sources of Data” column in the data tables. Published references list authors, title, journal citation, as well as foods and flavonoids analyzed. Sources of unpublished data are also provided.

### **References Cited in the Documentation**

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**Patil et al.**, *New Phytol.*, 1995, 130, 340-355

**Van der Sluis et al.**, *J. Agric. Food Chem.*, 2001, 49, 3606-3613

**Winkel-Shirley, B.**, *Current Opinion in Plant Biology*, 2002, 5, 218-223

**Wu et al.**, *J. Agric. Food Chem.*, 2006, 54, 4069-4075

Figure 1. Chemical structure of flavonols (quercetin, kaempferol, myricetin, isorhamnetin)

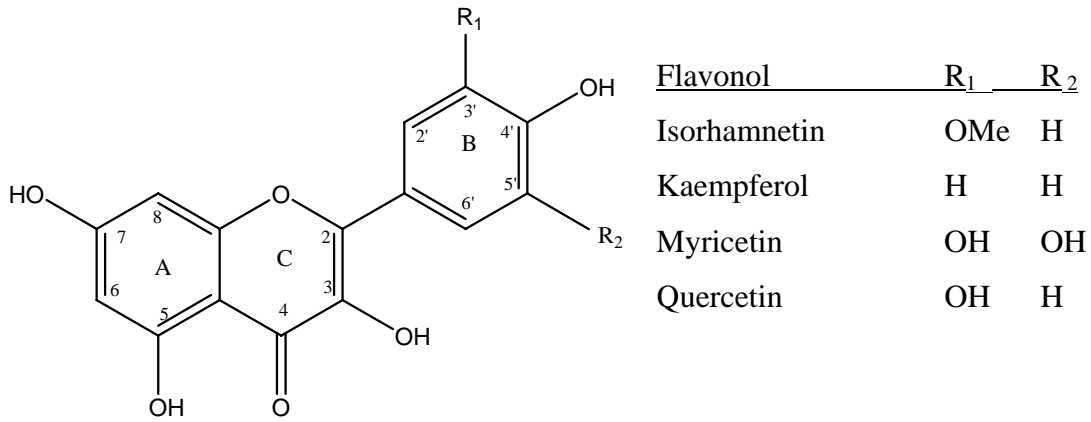


Figure 2. Chemical structure of flavones (luteolin, apigenin)

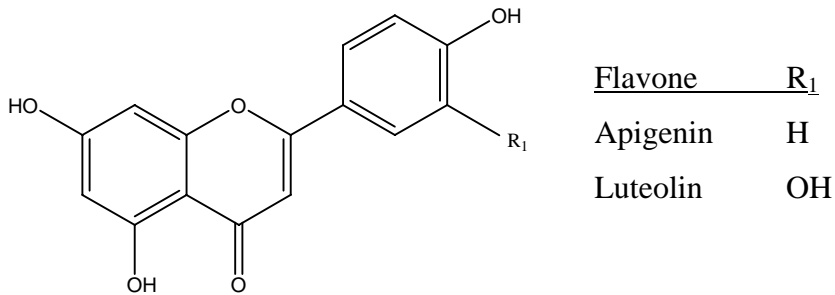


Figure 3. Chemical structure of flavanones (eriodictyol, hesperetin, naringenin).

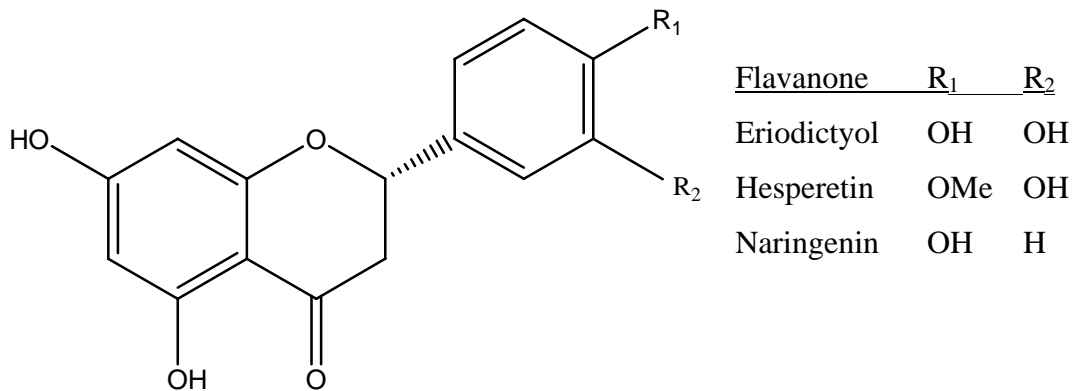
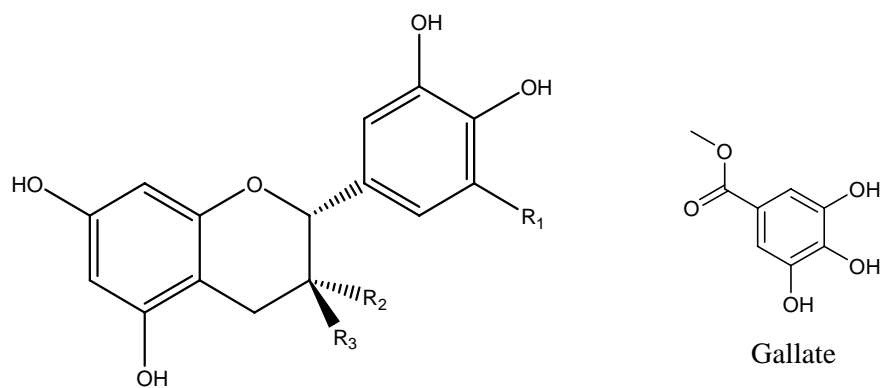
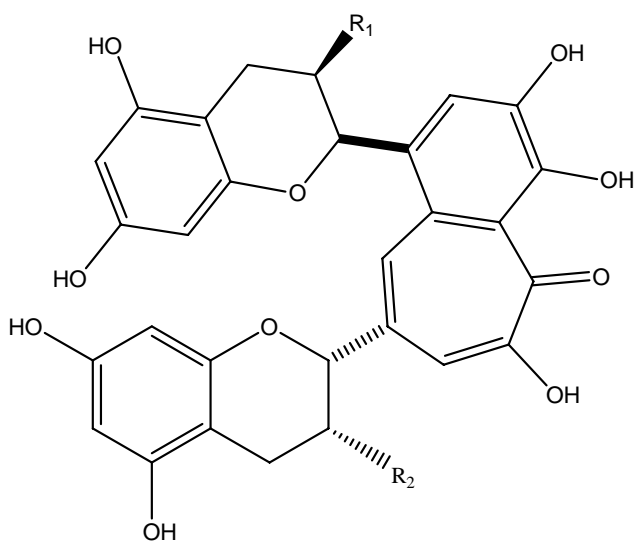


Figure 4. Structure of flavan-3-ols (catechins and epicatechins).



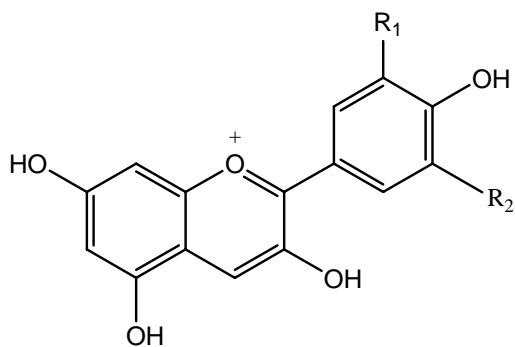
Flavan-3-ol	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>
(+)-Catechin (C)	H	H	OH
(+)-Catechin-3-gallate (CG)	H	H	Gallate
(-)-Epicatechin (EC)	H	OH	H
(-)-Epicatechin-3-gallate (ECG)	H	Gallate	H
(-)-Epigallocatechin (EGC)	OH	OH	H
(-)-Epigallocatechin-3-gallate (EGCG)	OH	Gallate	H
(+)-Gallocatechin (GC)	OH	H	OH
(+)-Gallocatechin-3-gallate (GCG)	OH	H	Gallate

Figure 5. Chemical structure of theaflavins.



Theaflavin	R <sub>1</sub>	R <sub>2</sub>
Theaflavin	OH	OH
Theaflavin-3-gallate	Gallate	OH
Theaflavin-3'-gallate	OH	Gallate
Theaflavin-3,3'-digallate	Gallate	Gallate

Figure 6. Chemical structure of anthocyanidins (cyanidin, delphinidin, malvidin, pelargonidin, peonidin, petunidin).



<u>Anthocyanidin</u>	<u>R<sub>1</sub></u>	<u>R<sub>2</sub></u>
Cyanidin	H	OH
Delphinidin	OH	OH
Malvidin	OMe	OMe
Pelargonidin	H	H
Peonidin	H	OMe
Petunidin	OH	OMe

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
14003	Alcoholic beverage, beer, regular, all	Flavan-3-ols	(-)-Epicatechin	0.33	14	0.27	0.00	3.79	B	9, 32, 36, 111, 142
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	9, 36
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	9, 36
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	9, 36
			(+)-Catechin	2.07	15	0.84	0.00	10.06	B	1, 9, 32, 36, 111, 142
			(+)-Gallocatechin	0.08	4	0.03	0.00	0.10	B	9, 36
		Flavanones	Hesperetin	0.00	1		0.00	0.00	C	1
			Naringenin	0.00	1		0.00	0.00	C	1
		Flavones	Apigenin	0.00	1		0.00	0.00	C	73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.81	2	0.81	0.00	1.63	C	1, 73
Myricetin	0.03		2	0.03	0.00	0.05	C	1, 73		
Quercetin	0.02		11	0.01	0.00	0.09	B	1, 32, 73, 142		
99323	Alcoholic beverage, wine, berry, colored	Flavonols	Kaempferol	0.03	28	0.01	0.00	0.33	B	120, 184
			Myricetin	0.72	28	0.12	0.13	2.26	B	120, 184
			Quercetin	0.63	28	0.08	0.14	2.43	B	120, 184
99074	Alcoholic beverage, wine, berry, white	Flavonols	Kaempferol	0.00	2		0.00	0.00	B	184
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	184
		Flavonols	Quercetin	0.20	2	0.21	0.00	0.41	B	184
99075	Alcoholic beverage, wine, sherry	Flavan-3-ols	(-)-Epicatechin	1.25	3		1.25	1.25	C	11
			(+)-Catechin	1.60	6	0.47	0.37	2.37	C	11, 64
		Flavonols	Isorhamnetin	0.00	3		0.00	0.00	C	144
			Kaempferol	0.00	3		0.00	0.00	C	144
			Myricetin	0.00	3		0.00	0.00	C	144
			Quercetin	0.01	3		0.01	0.01	C	144
14096	Alcoholic beverage, wine, table, red	Anthocyanidins	Cyanidin	0.40	90	0.11	0.00	7.17	B	4, 42, 49, 52, 57, 155
		Anthocyanidins	Delphinidin	1.04	85	0.09	0.17	2.50	B	4, 42, 52, 57, 62, 155
		Anthocyanidins	Malvidin	7.00	104	1.05	0.00	93.42	B	4, 42, 49, 52, 57, 62, 155, 170
		Anthocyanidins	Peonidin	0.84	85	0.22	0.04	16.08	B	4, 42, 52, 57, 62, 155
		Anthocyanidins	Petunidin	0.93	85	0.09	0.18	1.76	B	4, 42, 52, 57, 62, 155
		Flavan-3-ols	(-)-Epicatechin	3.28	870	0.09	0.23	16.50	B	4, 9, 35, 36, 49, 57, 60, 61, 62, 110, 145, 146, 147, 170
			(-)-Epicatechin 3-gallate	0.01	19	0.01	0.00	0.11	A	9, 35, 36
			(-)-Epigallocatechin	0.06	18	0.01	0.00	0.28	A	9, 36
			(-)-Epigallocatechin 3-gallate	0.00	18		0.00	0.00	A	9, 36

<sup>1</sup> Table contains data for those compounds where analytical data were available; lack of data does not mean the compound is not present in a particular food.

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

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(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(+)-Catechin	7.02	871	0.20	0.00	39.00	B	1, 9, 35, 36, 49, 57, 60, 61, 62, 110, 145, 146, 147, 170
			(+)-Gallocatechin	0.10	18	0.02	0.00	0.42	A	9, 36
		Flavanones	Hesperetin	0.63	2	0.36	0.27	0.99	C	1
			Naringenin	1.77	2	0.74	1.03	2.51	C	1
		Flavones	Apigenin	1.33	24	0.25	0.00	4.70	B	52, 73, 152
			Luteolin	0.00	7		0.00	0.00	B	73, 152
		Flavonols	Isorhamnetin	0.07	32	0.01	0.00	0.24	B	43, 144, 161
			Kaempferol	0.24	134	0.01	0.00	3.02	B	1, 43, 57, 73, 144, 145, 146, 147, 152, 161, 176, 184
			Myricetin	0.94	187	0.08	0.00	9.70	B	1, 43, 49, 52, 57, 73, 81, 110, 144, 145, 146, 147, 152, 161, 176, 184
			Quercetin	2.16	210	0.08	0.00	24.41	B	1, 43, 49, 52, 57, 61, 73, 81, 101, 110, 144, 145, 146, 147, 152, 161, 176, 184
14106	Alcoholic beverage, wine, table, white	Anthocyanidins	Cyanidin	0.00	6		0.00	0.00	C	49
			Malvidin	0.06	7	0.04	0.00	0.24	C	49, 170
		Flavan-3-ols	(-)-Epicatechin	0.55	50	0.12	0.05	6.00	B	4, 9, 15, 36, 49, 146, 170
			(-)-Epicatechin 3-gallate	0.00	9		0.00	0.00	B	9, 36
			(-)-Epigallocatechin	0.00	9		0.00	0.00	B	9, 36
			(-)-Epigallocatechin 3-gallate	0.00	9		0.00	0.00	B	9, 36
			(+)-Catechin	0.77	52	0.18	0.00	5.80	B	1, 4, 9, 15, 36, 49, 146, 170
			(+)-Gallocatechin	0.00	9	0.00	0.00	0.01	B	9, 36
		Flavanones	Hesperetin	0.40	2	0.08	0.32	0.48	C	1
			Naringenin	0.38	2	0.38	0.00	0.77	C	1
		Flavones	Apigenin	0.00	2		0.00	0.00	B	73
			Luteolin	0.00	2		0.00	0.00	B	73
		Flavonols	Isorhamnetin	0.00	32	0.00	0.00	0.02	B	43, 144, 161
			Kaempferol	0.01	39	0.01	0.00	0.27	B	1, 43, 73, 144, 146, 161, 184
			Myricetin	0.03	45	0.00	0.00	0.19	B	1, 43, 49, 73, 144, 146, 161, 184
			Quercetin	0.09	76	0.01	0.00	0.84	B	1, 15, 43, 49, 73, 144, 146, 161, 184
11001	Alfalfa seeds, sprouted, raw ( <i>Medicago sativa</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	C	152
			Luteolin	0.00	1		0.00	0.00	C	152
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	152
			Myricetin	0.00	1		0.00	0.00	C	152

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Quercetin	1.70	1		1.70	1.70	C	152
99001	Annual sow-thistle, leaves ( <i>Sonchus oleraceus</i> )	Flavones	Apigenin	3.80	1		3.80	3.80	B	175
			Luteolin	6.50	1		6.50	6.50	B	175
			Flavonols	Isorhamnetin	0.70	1		0.70	0.70	B
			Kaempferol	3.80	1		3.80	3.80	B	175
			Myricetin	3.60	1		3.60	3.60	B	175
			Quercetin	16.00	1		16.00	16.00	B	175
99083	Apple cider (European)	Flavan-3-ols	(-)-Epicatechin	0.32	6	0.20	0.00	1.15	B	4, 36, 169
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	1.95	5	1.21	0.00	5.53	C	4, 36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavonols	Quercetin	0.48	2	0.48	0.00	0.96	C	4
09016	Apple juice, canned or bottled, unsweetened, without added ascorbic acid	Flavan-3-ols	(-)-Epicatechin	4.71	13	2.25	0.00	21.86	B	9, 156, 165, 181
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(+)-Catechin	1.25	13	0.61	0.00	6.74	B	9, 156, 165, 181
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	9
		Flavones	Apigenin	0.00	4		0.00	0.00	C	73, 152
			Luteolin	0.00	4		0.00	0.00	C	73, 152.
		Flavonols	Kaempferol	0.00	4		0.00	0.00	C	73, 152
			Myricetin	0.01	4	0.01	0.00	0.05	C	73, 152
	Quercetin	0.62	17	0.19	0.00	3.01	B	73, 128, 152, 156, 165, 181		
99002	Apple, skin only ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	5.50	8	1.84	0.00	13.32	C	178
		Flavan-3-ols	(-)-Epicatechin	28.73	8	5.73	7.81	59.16	C	178
			(+)-Catechin	7.40	8	1.54	0.00	12.39	C	178
		Flavonols	Quercetin	19.36	8	1.04	14.76	23.49	C	178
97066	Apples, Fuji, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	0.76	22	0.10	0.00	1.83	B	6, 48, 68, 190
			Delphinidin	0.01	12	0.00	0.00	0.02	B	48, 68
			Malvidin	0.00	8		0.00	0.00	B	68
			Pelargonidin	0.01	12	0.00	0.00	0.02	B	48, 68
			Peonidin	0.00	8		0.00	0.00	B	68
			Petunidin	0.00	8		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	5.21	10	1.42	1.01	13.23	B	6, 68
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	B	68
			(-)-Epigallocatechin	1.14	8	0.32	0.22	2.51	B	68

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NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
			(-)-Epigallocatechin 3-gallate	1.93	8	0.95	0.08	6.26	B	68		
			(+)-Catechin	0.70	10	0.17	0.10	1.30	B	6, 68		
			(+)-Gallocatechin	0.00	8		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	8		0.00	0.00	B	68		
			Naringenin	0.00	8		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	12	0.00	0.00	0.01	B	48, 68		
			Luteolin	0.01	8	0.00	0.00	0.02	B	48, 68		
		Flavonols	Kaempferol	0.01	4		0.01	0.01	C	48		
			Myricetin	0.01	12	0.00	0.00	0.03	B	48, 68		
Quercetin	2.02		14	0.32	0.00	4.91	B	6, 48, 68				
97067	Apples, Gala, with peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	1.52	16	0.19	0.00	2.36	B	6, 68, 190		
			Delphinidin	0.00	8		0.00	0.00	B	68		
			Malvidin	0.00	8		0.00	0.00	B	68		
			Pelargonidin	0.00	8		0.00	0.00	B	68		
			Peonidin	0.00	8		0.00	0.00	B	68		
			Petunidin	0.00	8		0.00	0.00	B	68		
		Flavan-3-ols	(-)-Epicatechin	4.71	8	1.30	1.11	10.40	B	6, 68		
			(-)-Epicatechin 3-gallate	0.00	6		0.00	0.00	B	68		
			(-)-Epigallocatechin	0.67	6	0.12	0.33	0.96	B	68		
			(-)-Epigallocatechin 3-gallate	0.11	6	0.07	0.00	0.33	B	68		
			(+)-Catechin	1.56	8	0.78	0.13	5.10	B	6, 68		
			(+)-Gallocatechin	0.00	6		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	6		0.00	0.00	B	68		
			Naringenin	0.00	6		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	10		0.00	0.00	B	68, 102		
			Luteolin	0.00	6		0.00	0.00	B	68, 102		
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	102		
			Myricetin	0.00	10		0.00	0.00	B	68, 102		
			Quercetin	4.57	12	0.80	2.73	10.10	B	6, 68, 102		
		97069	Apples, Golden Delicious, with peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	2.04	10	0.58	0.00	4.84	B	6, 68
				Anthocyanidins	Delphinidin	0.00	8		0.00	0.00	B	68
Malvidin	0.00				8		0.00	0.00	B	68		
Pelargonidin	0.00				8		0.00	0.00	B	68		
Peonidin	0.00				8		0.00	0.00	B	68		
Petunidin	0.00				8		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			3.79	10	0.63	1.32	6.47	B	6, 68		
	(-)-Epicatechin 3-gallate			0.00	8		0.00	0.00	B	68		
	(-)-Epigallocatechin			0.35	8	0.13	0.00	0.71	B	68		
	(-)-Epigallocatechin 3-gallate			0.19	8	0.07	0.00	0.40	B	68		



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NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
			(+)-Catechin	0.47	10	0.20	0.00	1.60	B	6, 68		
			(+)-Gallocatechin	0.00	8		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	8		0.00	0.00	B	68		
			Naringenin	0.00	8		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	8		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	8		0.00	0.00	B	68		
			Quercetin	2.81	10	0.41	1.57	4.40	B	6, 68		
97068	Apples, Golden Delicious, without peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	0.73	4	0.02	0.70	0.76	B	68		
			Delphinidin	0.00	4		0.00	0.00	B	68		
			Malvidin	0.00	4		0.00	0.00	B	68		
			Pelargonidin	0.00	4		0.00	0.00	B	68		
			Peonidin	0.00	4		0.00	0.00	B	68		
			Petunidin	0.00	4		0.00	0.00	B	68		
		Flavan-3-ols	(-)-Epicatechin	6.17	3	0.21	5.96	6.58	B	68, 178		
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	68		
			(-)-Epigallocatechin	1.52	2		1.52	1.52	B	68		
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	68		
			(+)-Catechin	3.66	3	1.77	0.11	5.43	B	68, 178		
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	2		0.00	0.00	B	68		
			Naringenin	0.00	2		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	4		0.00	0.00	B	68		
			Luteolin	0.00	4		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	4		0.00	0.00	B	68		
			Quercetin	0.53	5	0.03	0.43	0.56	B	68, 178		
		97070	Apples, Granny Smith, with peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	1.33	8	0.25	0.55	2.37	B	68
					Delphinidin	0.00	8		0.00	0.00	B	68
Malvidin	0.00				8		0.00	0.00	B	68		
Pelargonidin	0.00				8		0.00	0.00	B	68		
Peonidin	0.00				8		0.00	0.00	B	68		
Petunidin	0.00				8		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			3.60	14	0.11	2.18	6.07	B	36, 68		
	(-)-Epicatechin 3-gallate			0.01	14	0.01	0.00	0.05	B	36, 68		
	(-)-Epigallocatechin			0.71	14	0.19	0.00	1.69	B	36, 68		
	(-)-Epigallocatechin 3-gallate			0.24	14	0.06	0.00	0.52	B	36, 68		
	(+)-Catechin			0.62	14	0.07	0.30	1.09	B	36, 68		
	(+)-Gallocatechin			0.00	14		0.00	0.00	B	36, 68		
Flavanones	Hesperetin			0.00	8		0.00	0.00	B	68		

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NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Naringenin	0.00	8		0.00	0.00	B	68
			Apigenin	0.00	10		0.00	0.00	B	68, 152
			Luteolin	0.00	6		0.00	0.00	B	68, 152
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	152
			Myricetin	0.00	10		0.00	0.00	B	68, 152
			Quercetin	3.25	10	0.23	2.40	4.14	B	68, 152
09003	Apples, raw, with skin ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	2.44	80	0.32	0.00	10.70	B	6, 48, 68, 183, 190
			Delphinidin	0.00	48	0.00	0.00	0.02	A	48, 68
			Malvidin	0.00	40		0.00	0.00	A	68
			Pelargonidin	0.00	48	0.00	0.00	0.02	A	48, 68
			Peonidin	0.01	44	0.01	0.00	0.18	A	68
			Petunidin	0.00	40		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	6.07	117	0.26	0.80	19.16	B	8, 36, 94, 177, 183
			(-)-Epicatechin 3-gallate	0.01	87	0.00	0.00	0.19	A	8, 36, 68
			(-)-Epigallocatechin	0.36	87	0.06	0.00	2.51	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.26	87	0.10	0.00	6.26	A	8, 36, 68
			(+)-Catechin	0.89	107	0.03	0.00	5.10	A	6, 8, 36, 68, 177
			(+)-Gallocatechin	0.00	87		0.00	0.00	A	8, 36, 68
		Flavanones	Naringenin	0.00	38		0.00	0.00	A	68
		Flavones	Apigenin	0.00	63	0.00	0.00	0.01	A	48, 68, 74, 102, 152
			Luteolin	0.17	43	0.09	0.00	2.70	B	48, 68, 74, 102., 152
		Flavonols	Kaempferol	0.02	24	0.02	0.00	0.50	B	48, 74, 102, 110, 152
			Myricetin	0.00	63	0.00	0.00	0.03	A	48, 68, 74, 102, 152
			Quercetin	4.27	88	0.27	0.00	11.47	B	6, 48, 68, 74, 94, 102, 110, 128, 152, 183
09004	Apples, raw, without skin ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	1.81	16	0.69	0.60	8.90	B	68
			Delphinidin	0.01	16	0.00	0.00	0.02	B	68
			Malvidin	0.00	8		0.00	0.00	B	68
			Pelargonidin	0.01	16	0.00	0.00	0.02	B	68
			Peonidin	0.00	8		0.00	0.00	B	68
			Petunidin	0.00	8		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	6.15	46	0.56	0.00	14.23	B	8, 25, 68, 178
			(-)-Epicatechin 3-gallate	0.00	34		0.00	0.00	A	8, 68
			(-)-Epigallocatechin	0.25	34	0.09	0.00	1.52	A	8, 68
			(-)-Epigallocatechin 3-gallate	0.05	34	0.03	0.00	0.48	A	8, 68
			(+)-Catechin	1.32	40	0.19	0.00	5.52	B	8, 68, 178
			(+)-Gallocatechin	0.00	34		0.00	0.00	A	8, 68
		Flavanones	Hesperetin	0.00	6		0.00	0.00	B	68
			Naringenin	0.00	6		0.00	0.00	B	68

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		Flavones	Apigenin	0.00	16	0.00	0.00	0.01	B	68		
			Luteolin	0.01	16	0.00	0.00	0.02	B	68		
		Flavonols	Kaempferol	0.01	8		0.01	0.01	C	48		
			Myricetin	0.01	16	0.00	0.00	0.03	B	8, 68		
			Quercetin	0.96	47	0.13	0.00	2.00	B	25, 48, 68, 81, 178, 183		
97072	Apples, Red Delicious, with peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	6.09	20	0.78	2.20	10.70	B	48, 68, 190		
			Delphinidin	0.01	12	0.00	0.00	0.02	B	48, 68		
			Malvidin	0.00	8		0.00	0.00	B	68		
			Pelargonidin	0.01	12	0.00	0.00	0.02	B	48, 68		
			Peonidin	0.05	12	0.02	0.00	0.18	B	68, 190		
			Petunidin	0.00	8		0.00	0.00	B	68		
		Flavan-3-ols	(-)-Epicatechin	7.10	15	0.74	0.80	15.92	B	36, 68, 178		
			(-)-Epicatechin 3-gallate	0.00	14		0.00	0.00	B	36, 68		
			(-)-Epigallocatechin	0.37	14	0.16	0.00	1.44	B	36, 68		
			(-)-Epigallocatechin 3-gallate	0.13	14	0.06	0.00	0.65	B	36, 68		
			(+)-Catechin	1.12	15	0.13	0.00	2.54	B	36, 68, 178		
			(+)-Gallocatechin	0.00	14		0.00	0.00	B	36, 68		
		Flavanones	Hesperetin	0.00	8		0.00	0.00	B	68		
			Naringenin	0.00	8		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	12	0.00	0.00	0.01	B	48, 68		
			Luteolin	0.01	8	0.00	0.00	0.02	B	48, 68		
		Flavonols	Kaempferol	0.01	4		0.01	0.01	C	48		
			Myricetin	0.01	12	0.00	0.00	0.03	B	48, 68		
			Quercetin	4.70	13	0.36	0.25	7.60	B	48, 68, 178		
		97071	Apples, Red Delicious, without peel, raw ( <i>Malus domestica</i> )	Anthocyanidins	Cyanidin	2.95	8	1.29	0.80	8.90	B	48, 68
					Delphinidin	0.01	8	0.00	0.00	0.02	B	48, 68
Malvidin	0.00				4		0.00	0.00	B	68		
Pelargonidin	0.01				8	0.00	0.00	0.02	B	48, 68		
Peonidin	0.00				4		0.00	0.00	B	68		
Petunidin	0.00				4		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			4.09	4	0.06	3.98	4.20	B	68		
	(-)-Epicatechin 3-gallate			0.00	4		0.00	0.00	B	68		
	(-)-Epigallocatechin			1.37	4	0.04	1.30	1.44	B	68		
	(-)-Epigallocatechin 3-gallate			0.46	4	0.01	0.43	0.48	B	68		
	(+)-Catechin			1.00	4	0.01	0.97	1.02	B	68		
	(+)-Gallocatechin			0.00	4		0.00	0.00	B	68		
Flavanones	Hesperetin			0.00	4		0.00	0.00	B	68		
	Naringenin			0.00	4		0.00	0.00	B	68		
Flavones	Apigenin			0.00	8	0.00	0.00	0.01	B	48, 68		

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			Luteolin	0.01	8	0.00	0.00	0.02	B	48, 68
		Flavonols	Kaempferol	0.01	4		0.01	0.01	C	48
			Myricetin	0.01	8	0.00	0.00	0.03	B	48, 68
			Quercetin	0.41	8	0.01	0.00	0.66	B	48, 68
97084	Apples, Renette, raw ( <i>Malus domestica</i> )		Flavan-3-ols	(-)-Epicatechin	6.89	6		6.89	6.89	C
		(-)-Epicatechin 3-gallate		0.00	6		0.00	0.00	C	36
		(-)-Epigallocatechin		0.00	6		0.00	0.00	C	36
		(-)-Epigallocatechin 3-gallate		0.00	6		0.00	0.00	C	36
		(+)-Catechin		1.38	6		1.38	1.38	C	36
		(+)-Gallocatechin		0.00	6		0.00	0.00	C	36
09019	Applesauce, canned, unsweetened, without added ascorbic acid	Flavan-3-ols	(-)-Epicatechin	5.41	1		5.41	5.41	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.69	1		0.69	0.69	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	2.00	4		2.00	2.00	B	74
09023	Apricots, canned, water pack, without skin, solids and liquids	Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.00	4		0.00	0.00	B	74
09021	Apricots, raw ( <i>Prunus armeniaca</i> )	Flavan-3-ols	(-)-Epicatechin	5.47	12	1.39	0.02	8.26	B	8, 36, 177
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(+)-Catechin	4.79	12	1.22	0.31	7.34	B	8, 36, 177
			(+)-Gallocatechin	0.00	7		0.00	0.00	B	8, 36
		Flavones	Apigenin	0.00	2		0.00	0.00	C	74, 102
			Luteolin	0.00	2		0.00	0.00	C	74, 102
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	74, 102
			Myricetin	0.00	2		0.00	0.00	C	74, 102
			Quercetin	2.08	3	0.47	1.15	2.60	B	74, 81, 102
99043	Arctic bramble berries	Flavonols	Kaempferol	0.00	1		0.00	0.00	C	67

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	<i>(Rubus articus subsp. Articus)</i>		Myricetin	0.00	1		0.00	0.00	C	67
			Quercetin	3.10	1		3.10	3.10	C	67
11007	Artichokes, (globe or french), raw ( <i>Cynara scolymus</i> )	Flavanones	Naringenin	12.51	10	2.45	0.00	22.93	C	157, 187
		Flavones	Apigenin	4.70	13	1.13	0.00	16.26	C	93, 157, 187
			Luteolin	2.27	13	0.45	0.00	6.14	C	93, 157, 187
99362	Artichokes, Ocean Mist, boiled	Anthocyanidins	Cyanidin	0.00	1		0.00	0.00	B	68
			Delphinidin	0.00	1		0.00	0.00	B	68
			Malvidin	0.00	1		0.00	0.00	B	68
			Pelargonidin	0.00	1		0.00	0.00	B	68
			Peonidin	0.00	1		0.00	0.00	B	68
			Petunidin	0.00	1		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(+)-Catechin	0.00	1		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	1		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	1		0.00	0.00	B	68
			Naringenin	0.00	1		0.00	0.00	B	68
Flavones	Apigenin	0.00	1		0.00	0.00	B	68		
	Luteolin	0.00	1		0.00	0.00	B	68		
Flavonols	Myricetin	0.00	1		0.00	0.00	B	68		
	Quercetin	0.00	1		0.00	0.00	B	68		
99363	Artichokes, Ocean Mist, Microwaved	Anthocyanidins	Cyanidin	0.00	1		0.00	0.00	B	68
			Delphinidin	0.00	1		0.00	0.00	B	68
			Malvidin	0.00	1		0.00	0.00	B	68
			Pelargonidin	0.00	1		0.00	0.00	B	68
			Peonidin	0.00	1		0.00	0.00	B	68
			Petunidin	0.00	1		0.00	0.00	B	68
		Flavones	Apigenin	0.00	1		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
Flavonols	Myricetin	0.00	1		0.00	0.00	B	68		
	Quercetin	0.00	1		0.00	0.00	B	68		
11959	Arugula, raw ( <i>Eruca sativa</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6
		Flavones	Apigenin	0.00	2		0.00	0.00	C	6
			Luteolin	0.00	2		0.00	0.00	C	6
		Flavonols	Kaempferol	72.45	2	31.75	40.70	104.20	C	6
Quercetin	6.95		2	6.95	0.00	13.90	C	6		
11012	Asparagus, cooked,	Flavonols	Quercetin	7.61	4		7.61	7.61	C	106

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	boiled, drained									
11011	Asparagus, raw ( <i>Asparagus officinalis</i> )	Flavonols	Quercetin	12.40	21	2.11	2.31	28.72	B	106, 151
09037	Avocados, raw, all commercial varieties ( <i>Persea americana</i> )	Anthocyanidins	Cyanidin	0.33	6	0.11	0.00	0.58	A	68
			Delphinidin	0.00	6		0.00	0.00	A	68
			Malvidin	0.00	6		0.00	0.00	A	68
			Pelargonidin	0.00	6		0.00	0.00	A	68
			Peonidin	0.00	6		0.00	0.00	A	68
		Petunidin	0.00	6		0.00	0.00	A	68	
		Flavan-3-ols	(-)-Epicatechin	0.37	14	0.07	0.00	1.11	A	8, 36, 68
			(-)-Epicatechin 3-gallate	0.00	14		0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin	0.00	13		0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.15	14	0.10	0.00	1.10	A	8, 36, 68
			(+)-Catechin	0.00	14		0.00	0.00	A	8, 36, 68
			(+)-Gallocatechin	0.00	14		0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	7		0.00	0.00	A	68, 152
			Luteolin	0.00	7		0.00	0.00	B	68, 152
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	152
Myricetin	0.00		7		0.00	0.00	B	68, 152		
Quercetin	0.00		7		0.00	0.00	B	68, 152		
09040	Bananas, raw ( <i>Musa X paradisiaca</i> )	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68
			Delphinidin	7.39	8	1.18	2.36	12.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.02	14	0.01	0.00	0.07	A	8, 36, 68
			(-)-Epicatechin 3-gallate	0.00	14		0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin	0.00	14	0.00	0.00	0.01	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.00	14		0.00	0.00	A	8, 36, 68
			(+)-Catechin	6.10	125	0.53	0.00	10.29	B	8, 36, 38, 68
			(+)-Gallocatechin	0.00	14		0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	9		0.00	0.00	B	68, 102
			Luteolin	0.00	5		0.00	0.00	B	68, 102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Myricetin	0.00	9		0.00	0.00	B	68, 102
			Quercetin	0.00	9		0.00	0.00	B	68, 102
02044	Basil, fresh ( <i>Ocimum basilicum</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	0.00	1		0.00	0.00	C	80
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	1		0.00	0.00	C	80
			Quercetin	0.00	1		0.00	0.00	C	80
16014	Beans, black, mature seeds, raw ( <i>Phaseolus vulgaris</i> )	Anthocyanidins	Delphinidin	11.98	1		11.98	11.98	C	190
			Malvidin	6.45	1		6.45	6.45	C	190
			Petunidin	9.57	1		9.57	9.57	C	190
99396	Beans, common, raw (P. vulgaris, cv. Zolfino) ( <i>Phaseolus vulgaris</i> var. Zolfino)	Anthocyanidins	Delphinidin	2.50	12	0.43	0.00	9.99	C	148
			Malvidin	0.10	12	0.02	0.00	0.40	C	148
			Petunidin	0.14	12	0.02	0.00	0.55	C	148
		Flavonols	Kaempferol	31.32	12	7.31	8.00	44.37	C	148
			Quercetin	0.00	12	0.00	0.00	0.01	C	148
16029	Beans, kidney, all types, mature seeds, canned	Flavan-3-ols	(-)-Epicatechin	0.35	1		0.35	0.35	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	1.66	1		1.66	1.66	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
16032	Beans, kidney, red, mature seeds, raw ( <i>Phaseolus vulgaris</i> )	Anthocyanidins	Cyanidin	1.19	1		1.19	1.19	C	190
			Pelargonidin	2.42	1		2.42	2.42	C	190
16042	Beans, pinto, mature seeds, raw ( <i>Phaseolus vulgaris</i> )	Flavan-3-ols	(-)-Epicatechin	0.14	3		0.14	0.14	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.05	3		0.05	0.05	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	5.07	3		5.07	5.07	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
11056	Beans, snap, green, canned, regular pack, drained solids	Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.02	5	0.02	0.00	0.09	C	74, 130
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	1.49	5	0.62	0.63	1.70	C	74, 130
11053	Beans, snap, green, cooked, boiled, drained, without salt	Anthocyanidins	Cyanidin	0.02	1		0.02	0.02	C	48
			Delphinidin	0.02	1		0.02	0.02	C	48
			Pelargonidin	0.02	1		0.02	0.02	C	48

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Quercetin	3.09	10	0.38	1.51	4.81	C	5
11060	Beans, snap, green, frozen, all styles, unprepared	Flavonols	Kaempferol	0.24	4		0.24	0.24	C	45
			Quercetin	1.30	1		1.30	1.30	C	45
11061	Beans, snap, green, frozen, cooked, boiled, drained without salt	Flavonols	Kaempferol	0.26	8	0.07	0.20	0.31	C	45
			Quercetin	1.25	8	0.33	1.00	1.50	C	45
11052	Beans, snap, green, raw ( <i>Phaseolus vulgaris</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	11		0.00	0.00	B	8, 36
			(-)-Epicatechin 3-gallate	0.00	11		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.00	11		0.00	0.00	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	11		0.00	0.00	B	8, 36
			(+)-Catechin	0.00	11		0.00	0.00	B	8, 36
			(+)-Gallocatechin	0.00	11		0.00	0.00	B	8, 36
		Flavones	Apigenin	0.00	5	0.00	0.00	0.01	B	48, 74
			Luteolin	0.00	7	0.00	0.00	0.02	B	48, 74
		Flavonols	Kaempferol	0.40	21	0.03	0.00	0.89	B	48, 71, 74, 130
Myricetin	0.00		7	0.00	0.00	0.03	B	48, 74		
Quercetin	2.88		28	0.21	0.50	9.09	B	5, 48, 71, 74, 81, 130		
11722	Beans, snap, yellow, raw ( <i>Phaseolus vulgaris</i> )	Flavonols	Kaempferol	0.42	9	0.06	0.20	0.71	C	71
			Quercetin	3.03	9	0.69	0.95	6.85	C	71
16049	Beans, white, mature seeds, raw ( <i>Phaseolus vulgaris</i> )	Flavan-3-ols	(-)-Epicatechin	0.09	3		0.09	0.09	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.01	3		0.01	0.01	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavonols	Kaempferol	3.40	6	1.10	1.19	5.61	C	151
43201	Bee Pollen	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.00	3		0.00	0.00	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavonols	Isorhamnetin	0.68	11	0.01	0.64	0.78	B	21
			Kaempferol	1.12	11	0.10	0.71	1.68	B	21
11080	Beets, raw ( <i>Beta vulgaris</i> )	Flavan-3-ols	Myricetin	3.34	11	1.13	0.00	13.64	B	21
			Quercetin	20.95	11	1.36	16.22	31.76	B	21
11080	Beets, raw ( <i>Beta vulgaris</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	5		0.00	0.00	C	74, 103
			Luteolin	0.37	5	0.37	0.00	1.83	C	74, 103
		Flavonols	Kaempferol	0.00	5		0.00	0.00	C	74, 103
			Myricetin	0.00	5		0.00	0.00	C	74, 103
Quercetin	0.13		5	0.13	0.00	0.67	C	74, 103		
99065	Bilberry soup	Flavonols	Quercetin	0.60	1		0.60	0.60	C	65
99357	Bilberry, raw ( <i>Vaccinium myrillus</i> )	Anthocyanidins	Cyanidin	112.59	1		112.59	112.59	C	83
			Delphinidin	161.93	1		161.93	161.93	C	83
			Malvidin	54.37	1		54.37	54.37	C	83
			Peonidin	51.01	1		51.01	51.01	C	83
			Petunidin	51.01	1		51.01	51.01	C	83
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	67
			Myricetin	1.09	8	0.05	0.00	2.10	C	65, 66, 67
			Quercetin	3.04	8	0.72	1.70	4.12	C	65, 66, 67
99007	Black Currant Juice	Anthocyanidins	Cyanidin	16.05	1		16.05	16.05	D	78
			Delphinidin	27.80	1		27.80	27.80	D	78
		Flavonols	Myricetin	1.86	4	0.66	0.66	3.16	C	65
			Quercetin	1.15	4	0.46	0.65	2.52	C	65
09042	Blackberries, raw ( <i>Rubus spp.</i> )	Anthocyanidins	Cyanidin	90.31	59	3.82	44.17	199.41	B	46, 68, 190
			Delphinidin	0.00	4		0.00	0.00	B	68
			Malvidin	0.00	4		0.00	0.00	B	68
			Pelargonidin	0.15	6	0.10	0.00	0.51	B	68, 190
			Peonidin	0.00	4		0.00	0.00	B	68
			Petunidin	0.00	4		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	4.66	20	0.47	0.00	18.08	B	8, 36, 68, 158, 177
			(-)-Epicatechin 3-gallate	0.00	11		0.00	0.00	B	8, 36, 68
			(-)-Epigallocatechin	0.10	11	0.01	0.00	0.36	B	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.68	11	0.68	0.00	7.44	B	8, 36, 68
			(+)-Catechin	37.06	16	24.71	0.00	312.86	B	8, 36, 68, 158, 177
			(+)-Gallocatechin	0.00	11		0.00	0.00	B	8, 36, 68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.00	5		0.00	0.00	B	68, 102
			Luteolin	0.00	3		0.00	0.00	B	68, 102

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Kaempferol	0.06	12	0.02	0.00	0.21	B	17, 102, 158
			Myricetin	0.67	15	0.67	0.00	9.99	B	17, 68, 158
			Quercetin	1.76	16	0.66	0.00	10.76	B	17, 68, 102, 158,
99359	Blackberry juice	Anthocyanidins	Cyanidin	24.80	9	4.01	7.87	44.54	C	46
99397	Blackberry juice concentrate	Anthocyanidins	Cyanidin	110.40	1		110.40	110.40	C	16
			Delphinidin	201.28	1		201.28	201.28	C	16
		Flavonols	Myricetin	20.85	1		20.85	20.85	C	16
			Quercetin	22.85	1		22.85	22.85	C	16
99313	Blood orange juice	Flavanones	Eriodictyol	0.00	13		0.00	0.00	C	14, 114
			Hesperetin	13.12	60	1.59	8.53	18.57	B	14, 113, 114
			Naringenin	1.68	60	0.20	1.30	3.85	B	14, 113, 114
		Flavones	Apigenin	0.00	2		0.00	0.00	D	14
		Flavonols	Quercetin	0.00	2		0.00	0.00	D	14
		09054	Blueberries, frozen, unsweetened	Anthocyanidins	Cyanidin	4.36	2	3.14	1.22	7.50
Delphinidin	21.59				2	1.18	20.40	22.77	C	48, 95
Malvidin	49.65				1		49.65	49.65	D	95
Pelargonidin	0.02				1		0.02	0.02	C	48
Peonidin	0.47				1		0.47	0.47	D	95
Petunidin	18.16				1		18.16	18.16	D	95
Flavones	Apigenin			0.01	1		0.01	0.01	C	48
	Luteolin			1.80	1		1.80	1.80	C	48
Flavonols	Kaempferol			1.10	1		1.10	1.10	C	48
	Myricetin			1.76	7	0.33	0.80	3.50	C	48, 66
	Quercetin			4.64	7	0.93	2.20	8.90	C	48, 66
09050	Blueberries, raw ( <i>Vaccinium spp.</i> )	Anthocyanidins	Cyanidin	16.97	27	1.92	4.79	48.06	B	48, 54, 68, 190
			Delphinidin	47.40	27	5.14	20.82	124.16	B	48, 54, 68, 190
			Malvidin	61.35	26	4.36	32.95	126.44	B	54, 68, 190
			Pelargonidin	0.00	8	0.00	0.00	0.02	B	48, 68
			Peonidin	11.38	26	1.78	1.01	38.99	B	54, 68, 190
			Petunidin	26.42	26	3.53	7.19	74.89	B	54, 68, 190
		Flavan-3-ols	(-)-Epicatechin	13.69	69	1.61	0.00	129.51	B	8, 36, 68, 158, 177
			(-)-Epicatechin 3-gallate	0.00	15		0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin	0.66	15	0.18	0.00	2.08	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.00	15		0.00	0.00	A	8, 36, 68
			(+)-Catechin	37.24	35	14.70	0.00	387.48	B	8, 36, 68, 158, 177
			(+)-Gallocatechin	0.12	15	0.03	0.00	0.59	A	8, 36, 68
		Flavanones	Hesperetin	0.00	8		0.00	0.00	A	68
			Naringenin	0.00	8		0.00	0.00	A	68
		Flavones	Apigenin	0.00	8	0.00	0.00	0.01	B	48, 68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Luteolin	0.20	4	0.20	0.00	0.80	B	48, 68
			Kaempferol	1.81	24	0.28	0.00	3.72	B	17, 48, 67, 158
			Myricetin	2.66	31	0.60	0.00	8.62	B	17, 48, 67, 68, 158
			Quercetin	5.05	41	0.65	0.00	14.60	B	17, 48, 67, 68, 81, 151, 158
97085	Blueberries, wild, raw ( <i>Vaccinium spp.</i> )	Anthocyanidins	Cyanidin	42.47	1		42.47	42.47	C	190
			Delphinidin	92.71	1		92.71	92.71	C	190
			Malvidin	103.80	1		103.80	103.80	C	190
			Peonidin	23.49	1		23.49	23.49	C	190
			Petunidin	58.23	1		58.23	58.23	C	190
99326	Bog whortleberries, wild, frozen ( <i>Vaccinium</i> )	Flavonols	Kaempferol	0.00	1		0.00	0.00	C	67
			Myricetin	7.30	2	4.70	2.60	12.00	C	66, 67
			Quercetin	17.70	2	1.90	15.80	19.60	C	66, 67
18075	Bread, whole-wheat, commercially prepared	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
16054	Broadbeans (fava beans), mature seeds, canned	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.35	4		0.35	0.35	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.55	4		0.55	0.55	B	74
11089	Broadbeans, immature seeds, cooked, boiled, drained, without salt	Flavan-3-ols	(-)-Epicatechin	7.82	4		7.82	7.82	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	4.65	4		4.65	4.65	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	8.16	4		8.16	8.16	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
11088	Broadbeans, immature seeds, raw ( <i>Vicia faba</i> )	Flavan-3-ols	(-)-Epicatechin	28.96	7	9.70	22.51	37.55	B	8, 36
		Flavan-3-ols	(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
		Flavan-3-ols	(-)-Epigallocatechin	15.47	7	5.29	14.03	17.38	B	8, 36

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36		
			(+)-Catechin	14.29	7	4.88	12.83	16.23	B	8, 36		
			(+)-Gallocatechin	4.15	7	0.80	0.00	9.68	B	8, 36		
		Flavones	Apigenin	0.00	1		0.00	0.00	C	74		
			Luteolin	0.00	1		0.00	0.00	C	74		
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	74		
			Myricetin	2.60	1		2.60	2.60	C	74		
Quercetin	2.00		1		2.00	2.00	C	74				
11097	Broccoli raab, cooked	Anthocyanidins	Cyanidin	0.00	3		0.00	0.00	B	68		
			Delphinidin	0.00	3		0.00	0.00	B	68		
			Malvidin	0.00	3		0.00	0.00	B	68		
			Pelargonidin	0.00	3		0.00	0.00	B	68		
			Peonidin	0.00	3		0.00	0.00	B	68		
			Petunidin	0.00	3		0.00	0.00	B	68		
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	68		
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	68		
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	68		
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	68		
			(+)-Catechin	0.00	4		0.00	0.00	B	68		
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68		
			Naringenin	0.00	4		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	3		0.00	0.00	B	68		
			Luteolin	0.00	3		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	3		0.00	0.00	B	68		
			Quercetin	1.05	3	1.05	0.00	3.16	B	68		
		11096	Broccoli raab, raw ( <i>Brassica ruvo</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
					Delphinidin	0.00	2		0.00	0.00	B	68
Malvidin	0.00				2		0.00	0.00	B	68		
Pelargonidin	0.00				2		0.00	0.00	B	68		
Peonidin	0.00				2		0.00	0.00	B	68		
Petunidin	0.00				2		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			0.00	2		0.00	0.00	B	68		
	(-)-Epicatechin 3-gallate			0.00	2		0.00	0.00	B	68		
	(-)-Epigallocatechin			0.00	2		0.00	0.00	B	68		
	(-)-Epigallocatechin 3-gallate			0.00	2		0.00	0.00	B	68		
	(+)-Catechin			0.00	2		0.00	0.00	B	68		
	(+)-Gallocatechin			0.00	2		0.00	0.00	B	68		
Flavanones	Hesperetin			0.00	2		0.00	0.00	B	68		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Naringenin	0.00	2		0.00	0.00	B	68
			Apigenin	0.00	2		0.00	0.00	B	68
			Luteolin	0.00	2		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	68
			Quercetin	2.25	2	2.25	0.00	4.49	B	68
11091	Broccoli, cooked, boiled, drained, without salt	Anthocyanidins	Cyanidin	0.00	4		0.00	0.00	B	68
			Delphinidin	0.00	4		0.00	0.00	B	68
			Malvidin	0.00	4		0.00	0.00	B	68
			Pelargonidin	0.00	4		0.00	0.00	B	68
			Peonidin	0.00	4		0.00	0.00	B	68
			Petunidin	0.00	4		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(+)-Catechin	0.00	1		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	1		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	1		0.00	0.00	B	68
			Naringenin	0.00	1		0.00	0.00	B	68
		Flavones	Apigenin	0.00	4		0.00	0.00	B	68
			Luteolin	0.00	2		0.00	0.00	B	68
		Flavonols	Kaempferol	1.38	1		1.38	1.38	D	129
Myricetin	0.00		4		0.00	0.00	B	68		
Quercetin	0.21		5	0.21	0.00	1.06	B	68, 129		
11092	Broccoli, frozen, chopped, unprepared	Flavonols	Kaempferol	2.49	3	0.76	0.96	3.27	C	137
			Quercetin	2.40	3	0.78	0.91	3.52	C	137
11090	Broccoli, raw ( <i>Brassica oleracea</i> var. <i>italica</i> )	Anthocyanidins	Cyanidin	0.00	4		0.00	0.00	B	68
			Delphinidin	0.00	4		0.00	0.00	B	68
			Malvidin	0.00	4		0.00	0.00	B	68
			Pelargonidin	0.00	4		0.00	0.00	B	68
			Peonidin	0.00	4		0.00	0.00	B	68
			Petunidin	0.00	4		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	10		0.00	0.00	A	8, 68
			(-)-Epicatechin 3-gallate	0.00	10		0.00	0.00	A	8, 68
			(-)-Epigallocatechin	0.00	10		0.00	0.00	A	8, 68
			(-)-Epigallocatechin 3-gallate	0.00	10		0.00	0.00	A	8, 68
			(+)-Catechin	0.00	10		0.00	0.00	A	8, 68
			(+)-Gallocatechin	0.00	10		0.00	0.00	A	8, 68
		Flavanones	Hesperetin	0.00	6		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Naringenin	0.00	6		0.00	0.00	A	68
		Flavones	Apigenin	0.00	11	0.00	0.00	0.01	B	10, 48, 68, 74, 103
			Luteolin	0.86	14	0.17	0.00	3.98	B	10, 48, 68, 74, 103, 151
		Flavonols	Kaempferol	4.01	17	0.34	0.70	9.15	B	10, 48, 74, 81, 103, 110, 129, 151
			Myricetin	0.01	11	0.00	0.00	0.03	B	10, 48, 68, 74, 103
			Quercetin	2.51	18	0.63	0.00	13.70	B	10, 48, 68, 74, 81, 103, 110, 129
11098	Brussels sprouts, raw ( <i>Brassica oleracea</i> ( <i>Gemmifera</i> Group))	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	2		0.00	0.00	C	74, 103
			Luteolin	0.34	2	0.34	0.00	0.67	C	74, 103
		Flavonols	Kaempferol	0.95	4	0.23	0.74	1.28	B	74, 81, 103
			Myricetin	0.00	2		0.00	0.00	C	74, 103
Quercetin	0.30		4	0.00	0.00	0.60	B	74, 81, 103		
20008	Buckwheat ( <i>Fagopyrum esculentum</i> Moench)	Flavonols	Quercetin	23.09	12	1.88	15.60	36.29	C	122
20011	Buckwheat flour, whole-groat	Flavan-3-ols	(-)-Epicatechin	3.53	1		3.53	3.53	D	139
		Flavonols	Quercetin	3.15	14	0.48	1.15	8.40	B	88, 139, 166
20009	Buckwheat groats, roasted, dry	Flavones	Apigenin	0.28	5	0.09	0.16	0.65	C	39
		Flavonols	Quercetin	7.16	8	1.00	2.14	11.49	C	39, 166
99086	Buckwheat, bran	Flavonols	Quercetin	14.90	12		14.90	14.90	C	88
11117	Cabbage, chinese (pak-choi), cooked, boiled, drained, without salt	Anthocyanidins	Cyanidin	0.02	2		0.02	0.02	C	48
			Delphinidin	0.02	2		0.02	0.02	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavones	Apigenin	0.01	1		0.01	0.01	C	48
			Luteolin	0.02	1		0.02	0.02	C	48
		Flavonols	Kaempferol	2.40	1		2.40	2.40	C	48
			Myricetin	0.03	1		0.03	0.03	C	48
			Quercetin	0.30	1		0.30	0.30	C	48
11116	Cabbage, chinese (pak-choi), raw ( <i>Brassica rapa</i> ( <i>Chinensis</i> Group))	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
			Apigenin	0.65	7	0.64	0.00	4.50	B	10, 30, 48, 103
			Luteolin	0.20	7	0.17	0.00	1.20	B	10, 30, 48, 103
		Flavonols	Kaempferol	8.32	13	1.41	0.01	16.30	B	10, 30, 48, 103, 151
			Myricetin	0.03	7	0.01	0.00	0.10	B	10, 30, 48, 103
			Quercetin	5.58	7	5.57	0.00	39.00	B	10, 30, 48, 103
11119	Cabbage, chinese (pe-tsai), raw ( <i>Brassica rapa</i> ( <i>Pekinensis</i> Group))	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.10	2		0.10	0.10	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.01	2		0.01	0.01	C	48
99377	Cabbage, Chinese, choi-sum, raw ( <i>Brassica rapa</i> subsp. <i>Chinensis</i> )	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	2.80	2		2.80	2.80	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.90	2		0.90	0.90	C	48
99378	Cabbage, Chinese, raw ( <i>Brassica rapa</i> subsp. <i>Chinensis</i> )	Flavonols	Kaempferol	22.51	6	8.19	20.02	25.00	C	151
11110	Cabbage, cooked, boiled, drained, without salt	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.01	2		0.01	0.01	C	48
11109	Cabbage, raw ( <i>Brassica oleracea</i> ( <i>Capitata</i> Group))	Flavones	Apigenin	0.08	11	0.07	0.00	0.80	B	10, 30, 74, 103
			Luteolin	0.10	14	0.03	0.00	0.42	B	10, 30, 74, 103, 151
		Flavonols	Kaempferol	0.15	17	0.07	0.00	1.19	B	10, 30, 74, 103, 137, 151
			Myricetin	0.00	11		0.00	0.00	B	10, 30, 74, 103
			Quercetin	0.30	20	0.25	0.00	5.10	B	10, 30, 74, 81, 103, 137, 151
11112	Cabbage, red, raw ( <i>Brassica oleracea</i> ( <i>Capitata</i> Group))	Anthocyanidins	Cyanidin	72.86	6	22.17	8.20	142.50	B	48, 190
			Delphinidin	0.10	2		0.10	0.10	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Apigenin	0.01	12	0.01	0.00	0.11	B	30, 48, 74, 103
			Luteolin	0.10	12	0.05	0.00	0.63	B	30, 48, 74, 103
		Flavonols	Kaempferol	0.00	13	0.00	0.00	0.01	B	18, 30, 48, 74, 103
			Myricetin	0.20	12	0.09	0.00	1.20	B	30, 48, 74, 103
			Quercetin	0.38	13	0.06	0.02	0.92	B	18, 30, 48, 74, 103
97034	Cacao beans ( <i>Theobroma cacao</i> )	Flavan-3-ols	(-)-Epicatechin	99.18	3		99.18	99.18	C	151
			(-)-Epigallocatechin	156.67	3		156.67	156.67	C	151
			(+)-Catechin	88.45	3		88.45	88.45	C	151
			(+)-Gallocatechin	8262.00	3		8262.00	8262.00	C	151
99321	Candies, dark chocolate (purchased in the Netherlands)	Flavan-3-ols	(-)-Epicatechin	41.50	2	8.75	32.74	50.25	B	8
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	8
			(+)-Catechin	11.99	2	1.24	10.75	13.24	B	8
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	8
99408	Candies, dark chocolate (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	255.00	2	47.00	208.00	302.00	C	171
			(-)-Epicatechin 3-gallate	60.00	2	60.00	0.00	120.00	C	171
			(-)-Epigallocatechin	16.50	2	6.50	10.00	23.00	C	171
			(-)-Epigallocatechin 3-gallate	257.50	2	90.50	167.00	348.00	C	171
			(+)-Catechin	64.50	2	1.50	63.00	66.00	C	171
19120	Candies, milk chocolate	Flavan-3-ols	(-)-Epicatechin	6.31	6	2.00	2.18	12.61	B	8, 36
			(-)-Epicatechin 3-gallate	0.00	6		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.00	6		0.00	0.00	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	6		0.00	0.00	B	8, 36
			(+)-Catechin	2.07	6	0.28	1.25	3.83	B	8, 36
			(+)-Gallocatechin	0.00	6		0.00	0.00	B	8, 36
99391	Candies, milk chocolate, with chocolate filling (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	773.00	1		773.00	773.00	C	171
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	171
			(-)-Epigallocatechin	20.00	1		20.00	20.00	C	171
			(-)-Epigallocatechin 3-gallate	277.00	1		277.00	277.00	C	171
			(+)-Catechin	39.00	1		39.00	39.00	C	171
99407	Candies, milk chocolate, with crisp rice (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	93.00	1		93.00	93.00	C	171
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	171
			(-)-Epigallocatechin	5.00	1		5.00	5.00	C	171
			(-)-Epigallocatechin 3-gallate	91.00	1		91.00	91.00	C	171
			(+)-Catechin	11.00	1		11.00	11.00	C	171
99388	Candies, milk chocolate, with hazelnuts	Flavan-3-ols	(-)-Epicatechin	346.00	2	277.00	69.00	623.00	C	171
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	C	171



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	(purchased in Turkey)		(-)-Epigallocatechin	23.00	2	13.00	10.00	36.00	C	171
			(-)-Epigallocatechin 3-gallate	317.00	2	150.00	167.00	467.00	C	171
			(+)-Catechin	56.50	2	15.50	41.00	72.00	C	171
99392	Candies, milk chocolate, with honey and almond nougat (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	442.50	2	396.50	46.00	839.00	C	171
			(-)-Epicatechin 3-gallate	36.50	2	36.50	0.00	73.00	C	171
			(-)-Epigallocatechin	27.50	2	11.50	16.00	39.00	C	171
			(-)-Epigallocatechin 3-gallate	356.00	2	184.00	172.00	540.00	C	171
			(+)-Catechin	61.00	2	10.00	51.00	71.00	C	171
99389	Candies, milk chocolate, with milk and coconut filling (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	32.00	1		32.00	32.00	C	171
			(-)-Epicatechin 3-gallate	119.00	1		119.00	119.00	C	171
			(-)-Epigallocatechin	17.00	1		17.00	17.00	C	171
			(-)-Epigallocatechin 3-gallate	200.00	1		200.00	200.00	C	171
			(+)-Catechin	53.00	1		53.00	53.00	C	171
99390	Candies, milk chocolate, with pistachios (purchased in Turkey)	Flavan-3-ols	(-)-Epicatechin	100.50	2	89.50	11.00	190.00	C	171
			(-)-Epicatechin 3-gallate	28.00	2	28.00	0.00	56.00	C	171
			(-)-Epigallocatechin	9.50	2	0.50	9.00	10.00	C	171
			(-)-Epigallocatechin 3-gallate	189.00	2	20.00	169.00	209.00	C	171
			(+)-Catechin	56.00	2	1.00	55.00	57.00	C	171
02054	Capers, canned ( <i>Capparis spinosa</i> )	Flavonols	Kaempferol	131.34	20	12.13	59.49	247.97	B	59, 77
			Quercetin	172.55	20	26.49	45.05	519.85	B	59, 77
99360	Capers, raw ( <i>Capparis</i> )	Flavonols	Kaempferol	259.19	3	27.06	214.99	308.33	C	59
			Quercetin	233.84	3	50.31	149.31	323.38	C	59
99399	Carob fiber (Caromax)	Flavonols	Kaempferol	11.67	4	2.32	6.75	17.74	C	125
			Myricetin	47.74	4	1.95	43.75	51.76	C	125
			Quercetin	58.13	4	9.03	39.11	74.97	C	125
16055	Carob flour ( <i>Ceratonia siliqua</i> )	Flavan-3-ols	(-)-Epicatechin 3-gallate	30.06	3		30.06	30.06	C	151
			(-)-Epigallocatechin 3-gallate	109.46	3		109.46	109.46	C	151
			(+)-Catechin	50.75	3		50.75	50.75	C	151
		Flavonols	Kaempferol	0.44	3	0.31	0.00	1.03	C	125
			Myricetin	6.73	3	1.12	5.03	8.83	C	125
			Quercetin	38.78	6	11.49	5.92	69.76	B	125, 151
99400	Carob kibbles	Flavonols	Kaempferol	0.57	1		0.57	0.57	C	125
			Myricetin	11.67	1		11.67	11.67	C	125
			Quercetin	3.63	1		3.63	3.63	C	125
11960	Carrots, baby, raw ( <i>Daucus carota</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavan-3-ols	Petunidin	0.00	2		0.00	0.00	B	68
			(-)-Epicatechin	0.00	4		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(+)-Catechin	0.00	4		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	68
Quercetin	0.00		2		0.00	0.00	B	68		
11128	Carrots, canned, regular pack, drained solids	Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.00	4		0.00	0.00	B	74
11124	Carrots, raw ( <i>Daucus carota</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	B	8, 36
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(+)-Catechin	0.00	7		0.00	0.00	B	8, 36
			(+)-Gallocatechin	0.00	7		0.00	0.00	B	8, 36
		Flavones	Apigenin	0.00	6		0.00	0.00	B	10, 74, 103
			Luteolin	0.13	6	0.13	0.00	0.80	B	10, 74, 103
		Flavonols	Kaempferol	0.10	6	0.10	0.00	0.60	B	10, 74, 103
			Myricetin	0.07	6	0.07	0.00	0.40	B	10, 74, 103
			Quercetin	0.31	6	0.25	0.00	1.50	B	10, 74, 103
11935	Catsup	Flavonols	Kaempferol	0.01	3		0.01	0.01	C	168
			Quercetin	0.86	3		0.86	0.86	C	168
11137	Cauliflower, frozen, unprepared	Flavonols	Kaempferol	0.25	3	0.11	0.09	0.47	C	137
			Quercetin	0.83	3	0.19	0.54	1.18	C	137
11135	Cauliflower, raw ( <i>Brassica oleracea</i> ( <i>Botrytis</i> Group))	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Apigenin	0.03	6	0.03	0.00	0.20	B	10, 74, 103
			Luteolin	0.07	6	0.07	0.00	0.40	B	10, 74, 103
		Flavonols	Kaempferol	0.38	7	0.22	0.00	1.25	B	10, 74, 103, 137
			Myricetin	0.00	6		0.00	0.00	B	10, 74, 103
			Quercetin	0.66	7	0.55	0.00	3.90	B	10, 74, 103, 137
11141	Celeriac, raw ( <i>Apium graveolens</i> )	Flavones	Apigenin	2.41	1		2.41	2.41	D	103
			Luteolin	0.00	1		0.00	0.00	D	103
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	103
			Myricetin	0.00	1		0.00	0.00	D	103
			Quercetin	0.18	1		0.18	0.18	D	103
99118	Celery hearts, green ( <i>Apium graveolens</i> )	Flavones	Apigenin	19.10	1		19.10	19.10	D	34
			Luteolin	3.50	1		3.50	3.50	D	34
99009	Celery hearts, white ( <i>Apium graveolens</i> )	Flavones	Apigenin	1.70	1		1.70	1.70	C	34
			Luteolin	0.66	1		0.66	0.66	C	34
11143	Celery, raw ( <i>Apium graveolens</i> )	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	2.34	22	0.70	0.00	10.80	B	34, 68, 75, 81, 151
			Luteolin	0.63	19	0.28	0.00	4.00	B	34, 68, 75, 81, 151
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68
Quercetin	0.39		9	0.39	0.00	3.50	B	33, 68		
11147	Chard, Swiss, raw ( <i>Beta vulgaris</i> (Cicla Group))	Flavan-3-ols	(+)-Catechin	2.15	12	0.25	0.10	6.70	C	138
		Flavonols	Kaempferol	4.30	12	0.87	0.50	9.20	C	138
			Myricetin	1.35	12	0.24	0.00	3.10	C	138
			Quercetin	2.63	12	0.40	0.30	7.50	C	138
09063	Cherries, sour, red, raw ( <i>Prunus cerasus</i> )	Anthocyanidins	Cyanidin	6.64	2	3.59	3.05	10.23	C	185
		Flavan-3-ols	(-)-Epicatechin	3.83	6	3.14	0.68	19.60	C	28, 177

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
		Flavones	(+)-Catechin	0.30	5		0.30	0.30	C	177		
			Apigenin	0.00	1		0.00	0.00	C	102		
			Luteolin	0.00	1		0.00	0.00	C	102		
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102		
			Myricetin	0.00	1		0.00	0.00	C	102		
			Quercetin	2.92	1		2.92	2.92	C	102		
09365	Cherries, sweet, canned, water-pack, drained	Flavan-3-ols	(-)-Epicatechin	4.31	1		4.31	4.31	C	8		
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8		
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8		
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8		
			(+)-Catechin	0.00	1		0.00	0.00	C	8		
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8		
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74		
			Luteolin	0.00	4		0.00	0.00	B	74		
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74		
			Myricetin	0.00	4		0.00	0.00	B	74		
			Quercetin	3.20	4		3.20	3.20	B	74		
		09070	Cherries, sweet, raw ( <i>Prunus avium</i> )	Anthocyanidins	Cyanidin	75.18	15	11.13	23.86	145.09	B	53, 68, 190
Delphinidin	0.00				4		0.00	0.00	B	68		
Malvidin	0.00				4		0.00	0.00	B	68		
Pelargonidin	0.54				11	0.19	0.00	1.88	B	53, 68		
Peonidin	4.47				15	0.58	1.93	10.99	B	53, 68, 190		
Petunidin	0.00				4		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			6.97	21	0.73	1.39	13.40	B	8, 28, 36, 68, 177		
	(-)-Epicatechin 3-gallate			0.05	11	0.01	0.00	0.20	A	8, 36, 68		
	(-)-Epigallocatechin			0.34	11	0.26	0.00	2.89	A	8, 36, 68		
	(-)-Epigallocatechin 3-gallate			0.00	10		0.00	0.00	B	8, 36, 68		
	(+)-Catechin			1.31	16	0.27	0.00	2.17	A	8, 36, 68, 177		
	(+)-Gallocatechin			0.00	11		0.00	0.00	A	8, 36, 68		
Flavanones	Hesperetin			0.00	4		0.00	0.00	B	68		
	Naringenin			0.00	4		0.00	0.00	B	68		
Flavones	Apigenin			0.00	6		0.00	0.00	B	68, 74, 102		
	Luteolin			0.00	6		0.00	0.00	B	68, 74, 102		
Flavonols	Kaempferol			0.00	2		0.00	0.00	C	74, 102		
	Myricetin			0.00	6		0.00	0.00	B	68, 74, 102		
	Quercetin			2.64	10	0.45	0.86	3.93	B	68, 74, 81, 102, 151		
16056	Chickpeas (garbanzo beans, bengal gram), mature seeds, raw ( <i>Cicer arietinum</i> )			Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
					(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
		(-)-Epigallocatechin	0.00		3		0.00	0.00	C	36		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	<i>arietinum</i> )		(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.00	3		0.00	0.00	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
11152	Chicory greens, raw ( <i>Cichorium intybus</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
			Flavones	Apigenin	0.77	6	0.50	0.00	2.80	B
		Luteolin		1.30	6	1.30	0.00	7.80	B	6, 74
		Flavonols	Kaempferol	2.45	6	1.83	0.00	11.10	B	6, 74
Myricetin	0.00		4		0.00	0.00	B	74		
Quercetin	4.82		6	4.12	0.00	25.20	B	6, 74		
99379	Chives, Chinese, raw ( <i>Allium tuberosum</i> )	Flavonols	Kaempferol	17.11	6	6.23	15.07	19.16	C	151
11156	Chives, raw ( <i>Allium schoenoprasum</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	2		0.00	0.00	C	80, 175
			Luteolin	0.15	2	0.15	0.00	0.30	C	80, 175
		Flavonols	Isorhamnetin	6.75	2	1.75	5.00	8.50	C	80, 175
			Kaempferol	10.00	3	2.25	5.50	12.50	B	18, 80, 175
			Myricetin	0.00	1		0.00	0.00	B	175
		Quercetin	4.77	3	2.88	0.90	10.40	B	18, 80, 175	
99398	Chokeberry juice concentrate	Anthocyanidins	Cyanidin	294.39	1		294.39	294.39	C	16
		Flavonols	Quercetin	68.17	1		68.17	68.17	C	16
99012	Chokeberry, raw ( <i>Aronia arbutifolia</i> )	Anthocyanidins	Cyanidin	435.78	5	46.40	307.84	947.52	C	163, 191
			Pelargonidin	1.44	1		1.44	1.44	C	191
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	67
			Myricetin	0.00	1		0.00	0.00	C	67
			Quercetin	8.90	1		8.90	8.90	C	67
99337	Cloudberries, raw ( <i>Rubus chamaemorus</i> )	Flavonols	Kaempferol	0.00	2		0.00	0.00	C	67
			Myricetin	0.00	2		0.00	0.00	C	67
			Quercetin	0.60	2		0.60	0.60	C	67
14192	Cocoa mix, powder	Flavan-3-ols	(-)-Epicatechin	26.20	15	1.24	18.00	32.00	C	20
14194	Cocoa mix, powder, prepared with water	Flavan-3-ols	(-)-Epicatechin	0.59	3		0.59	0.59	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(+)-Catechin	0.74	3		0.74	0.74	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
19165	Cocoa, dry powder, unsweetened	Flavonols	Quercetin	20.13	1		20.13	20.13	C	92
14209	Coffee, brewed from grounds, prepared with tap water	Flavan-3-ols	(-)-Epicatechin	0.04	4	0.02	0.00	0.06	B	9, 36
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	9, 36
			(-)-Epigallocatechin	0.04	4	0.02	0.00	0.05	B	9, 36
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	9, 36
			(+)-Catechin	0.00	4		0.00	0.00	B	9, 36
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	9, 36
		Flavones	Apigenin	0.00	1		0.00	0.00	C	73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	73
Myricetin	0.05		1		0.05	0.05	C	73		
Quercetin	0.05		1		0.05	0.05	C	73		
11165	Coriander (cilantro) leaves, raw ( <i>Coriandrum sativum</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	0.00	1		0.00	0.00	C	80
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	1		0.00	0.00	C	80
			Quercetin	52.90	4	23.14	5.00	68.86	C	80, 151
99014	Corn poppy, leaves ( <i>Papaver rhoeas</i> )	Flavones	Apigenin	0.10	1		0.10	0.10	B	175
			Luteolin	0.10	1		0.10	0.10	B	175
		Flavonols	Isorhamnetin	1.10	1		1.10	1.10	B	175
			Kaempferol	2.30	1		2.30	2.30	B	175
			Myricetin	1.10	1		1.10	1.10	B	175
			Quercetin	26.30	1		26.30	26.30	B	175
11167	Corn, sweet, yellow, raw ( <i>Zea mays</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
16062	Cowpeas, common (blackeyes, crowder, southern), mature seeds, raw ( <i>Vigna unguiculata</i> )	Anthocyanidins	Cyanidin	94.72	3		94.72	94.72	C	27
			Delphinidin	94.60	3		94.60	94.60	C	27
			Malvidin	34.28	3		34.28	34.28	C	27
			Peonidin	11.07	3		11.07	11.07	C	27
			Petunidin	27.82	3		27.82	27.82	C	27
		Flavonols	Kaempferol	1.92	3		1.92	1.92	C	27

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Myricetin	2.60	3		2.60	2.60	C	27
			Quercetin	17.22	3		17.22	17.22	C	27
09079	Cranberries, dried, sweetened	Anthocyanidins	Cyanidin	0.60	2		0.60	0.60	C	48
			Delphinidin	0.10	2		0.10	0.10	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	2.40	2		2.40	2.40	C	48
			Quercetin	4.50	2		4.50	4.50	C	48
09078	Cranberries, raw ( <i>Vaccinium macrocarpon</i> )	Anthocyanidins	Cyanidin	41.81	7	2.86	32.16	53.35	B	68, 190
			Delphinidin	7.66	5	1.93	0.12	10.66	B	68, 190
			Malvidin	0.31	6	0.22	0.00	1.34	B	68, 190
			Pelargonidin	0.00	4		0.00	0.00	B	68
			Peonidin	42.10	7	3.64	32.56	58.18	B	68, 190
			Petunidin	0.00	4		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	4.37	8	0.93	2.95	5.72	A	8, 68
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	A	8, 68
			(-)-Epigallocatechin	0.74	8	0.28	0.00	1.79	A	8, 68
			(-)-Epigallocatechin 3-gallate	0.97	8	0.48	0.00	2.86	A	8, 68
			(+)-Catechin	0.39	8	0.16	0.00	1.06	A	8, 68
			(+)-Gallocatechin	0.00	8		0.00	0.00	A	8, 68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.00	4		0.00	0.00	B	68
		Flavonols	Kaempferol	0.09	14	0.03	0.00	0.27	B	17, 67
			Myricetin	6.78	20	1.67	0.40	23.00	B	17, 67, 68, 75, 81
			Quercetin	15.09	20	1.06	7.30	25.00	B	17, 67, 68, 75, 81
14242	Cranberry juice cocktail, bottled	Anthocyanidins	Cyanidin	0.38	1		0.38	0.38	C	48
			Delphinidin	0.03	1		0.03	0.03	C	48
			Pelargonidin	0.03	1		0.03	0.03	C	48
		Flavan-3-ols	(+)-Catechin	0.19	1		0.19	0.19	C	29
		Flavones	Apigenin	0.01	1		0.01	0.01	C	48
			Luteolin	0.03	1		0.03	0.03	C	48
		Flavonols	Kaempferol	0.01	1		0.01	0.01	C	48
			Myricetin	0.51	2	0.24	0.27	0.75	C	29, 48
			Quercetin	1.27	2	0.14	1.13	1.41	C	29, 48
99110	Cranberry juice, raw	Flavan-3-ols	(+)-Catechin	0.92	1		0.92	0.92	C	29
		Flavonols	Myricetin	4.41	1		4.41	4.41	C	29

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09081	Cranberry sauce, canned, sweetened	Anthocyanidins	Quercetin	16.41	1		16.41	16.41	C	29
			Cyanidin	0.10	2		0.10	0.10	C	48
			Delphinidin	0.02	2		0.02	0.02	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
Myricetin	2.70		2		2.70	2.70	C	48		
Quercetin	2.40		2		2.40	2.40	C	48		
11203	Cress, garden, raw ( <i>Lepidium sativum</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	0.00	1		0.00	0.00	C	80
		Flavonols	Isorhamnetin	1.00	1		1.00	1.00	C	80
			Kaempferol	13.00	1		13.00	13.00	C	80
Quercetin	0.00	1		0.00	0.00	C	80			
99339	Crowberries, raw ( <i>Empetrum nigrum</i> )	Flavonols	Kaempferol	0.00	2		0.00	0.00	C	67
			Myricetin	4.65	2	0.25	4.40	4.90	C	67
			Quercetin	5.45	2	0.15	5.30	5.60	C	67
99066	Crowberry juice	Flavonols	Myricetin	3.49	2	0.03	3.46	3.51	C	65
			Quercetin	3.88	2	0.12	3.76	3.99	C	65
99102	Crown daisy, leaves ( <i>Chrysanthemum coronarium</i> var. <i>coronarium</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	30
			Luteolin	0.01	1		0.01	0.01	D	30
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	30
			Myricetin	0.02	1		0.02	0.02	D	30
11205	Cucumber, with peel, raw ( <i>Cucumis sativus</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	6		0.00	0.00	C	30, 74, 103
			Luteolin	0.00	6	0.00	0.00	0.01	C	30, 74, 103
		Flavonols	Kaempferol	0.06	6	0.06	0.00	0.33	C	30, 74, 103
			Myricetin	0.00	6		0.00	0.00	C	30, 74, 103
			Quercetin	0.04	6	0.04	0.00	0.24	C	30, 74, 103
99073	Currants, dried	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
09083	Currants, European black, raw ( <i>Ribes nigrum</i> )	Anthocyanidins	Cyanidin	85.63	9	11.15	53.36	149.40	C	78, 83, 105, 191
			Delphinidin	181.11	9	23.55	69.77	272.81	C	78, 83, 105, 191
			Pelargonidin	1.17	6	0.12	0.79	1.39	C	191
			Peonidin	0.66	7	0.11	0.26	1.09	C	83, 191
			Petunidin	3.87	7	1.55	0.07	12.30	C	83, 191
		Flavan-3-ols	(-)-Epicatechin	0.47	4		0.47	0.47	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.70	4		0.70	0.70	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	0.00	1		0.00	0.00	C	102
		Flavonols	Kaempferol	0.50	3	0.50	0.00	1.50	C	67, 102, 105
Myricetin	6.64		10	0.15	0.00	14.00	B	65, 67, 102, 105, 184		
Quercetin	5.55		10	0.71	4.40	8.60	B	65, 67, 102, 105, 184		
99044	Currants, red, raw ( <i>Ribes rubrum</i> )	Anthocyanidins	Cyanidin	12.91	2	4.79	8.12	17.70	C	105, 191
			Delphinidin	0.04	2	0.04	0.00	0.07	C	105, 191
		Flavan-3-ols	(-)-Epicatechin	0.08	7	0.02	0.00	0.19	B	8, 36
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.15	7	0.03	0.00	0.36	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(+)-Catechin	1.27	7	0.44	1.22	1.33	B	8, 36
			(+)-Gallocatechin	1.28	7	0.44	1.22	1.35	B	8, 36
		Flavones	Apigenin	0.00	2		0.00	0.00	C	74, 102
			Luteolin	0.00	2		0.00	0.00	C	74, 102
		Flavonols	Kaempferol	0.01	4	0.01	0.00	0.04	B	67, 74, 102, 105
			Myricetin	1.09	4	1.07	0.00	4.29	B	67, 74, 102, 105
			Quercetin	0.75	6	0.09	0.00	1.30	B	67, 74, 81, 102, 105
99045	Currants, white, raw ( <i>Ribes rubrum</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	D	105
			Delphinidin	0.00	2		0.00	0.00	D	105
		Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	(+)-Catechin	0.30	1		0.30	0.30	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
			Kaempferol	0.17	4	0.17	0.00	0.70	C	67, 105
			Myricetin	0.18	4	0.17	0.00	0.70	C	67, 105
			Quercetin	2.68	4	1.36	0.50	6.30	C	67, 105
09086	Custard-apple, (bullock's-heart), raw ( <i>Annona reticulata</i> )	Flavan-3-ols	(-)-Epicatechin	5.63	3		5.63	5.63	C	36
			(-)-Epicatechin 3-gallate	0.04	3		0.04	0.04	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.58	3		0.58	0.58	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
09087	Dates, deglet noor ( <i>Phoenix dactylifera</i> )	Anthocyanidins	Cyanidin	1.70	6	0.63	0.00	4.10	B	68
			Delphinidin	0.00	6		0.00	0.00	B	68
			Malvidin	0.00	6		0.00	0.00	B	68
			Pelargonidin	0.00	6		0.00	0.00	B	68
			Peonidin	0.00	6		0.00	0.00	B	68
			Petunidin	0.00	6		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	6		0.00	0.00	B	68
			Luteolin	0.00	3		0.00	0.00	B	68
Flavonols	Myricetin	0.00	6		0.00	0.00	B	68		
	Quercetin	0.93	6	0.43	0.00	2.40	B	68		
02045	Dill weed, fresh ( <i>Anethum graveolens</i> )	Flavanones	Hesperetin	0.00	2		0.00	0.00	C	80
		Flavones	Apigenin	0.00	3		0.00	0.00	C	80, 103
			Luteolin	0.00	3		0.00	0.00	C	80, 103
		Flavonols	Isorhamnetin	43.50	2	28.50	15.00	72.00	C	80
			Kaempferol	13.33	3	7.06	0.00	24.00	C	80, 103
Myricetin	0.70		1		0.70	0.70	D	103		
11616	Dock leaves, raw ( <i>Rumex spp.</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	B	175
			Luteolin	0.00	1		0.00	0.00	B	175

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	B	175
			Kaempferol	10.30	1		10.30	10.30	B	175
			Myricetin	5.70	1		5.70	5.70	B	175
			Quercetin	86.20	1		86.20	86.20	B	175
11209	Eggplant, raw ( <i>Solanum malongena</i> )	Anthocyanidins	Cyanidin	0.02	2		0.02	0.02	C	48
			Delphinidin	13.76	3	13.74	0.02	41.24	C	48, 190
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.00	3		0.00	0.00	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
Quercetin	0.00		2		0.00	0.00	C	48		
09088	Elderberries, raw ( <i>Sambucus spp.</i> )	Anthocyanidins	Cyanidin	758.48	14	60.83	379.15	1067.33	C	82, 191
			Pelargonidin	1.13	1		1.13	1.13	C	191
		Flavonols	Quercetin	42.00	13	2.66	29.00	60.00	C	82
99402	Elderberry juice concentrate	Anthocyanidins	Cyanidin	420.40	1		420.40	420.40	C	16
		Flavonols	Quercetin	108.16	1		108.16	108.16	C	16
11213	Endive, raw ( <i>Cichorium endivia</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	10.10	14	1.88	1.80	24.83	B	44, 74, 75
			Myricetin	0.00	4		0.00	0.00	B	74
Quercetin	0.00		4		0.00	0.00	B	74		
99058	Fennel, leaves, raw ( <i>Foeniculum vulgare</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	B	175
			Luteolin	0.10	1		0.10	0.10	B	175
		Flavonols	Isorhamnetin	9.30	1		9.30	9.30	B	175
			Kaempferol	6.50	1		6.50	6.50	B	175
			Myricetin	19.80	1		19.80	19.80	B	175

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09089	Figs, raw ( <i>Ficus carica</i> )	Anthocyanidins	Quercetin	48.80	1		48.80	48.80	B	175
			Cyanidin	0.00	8		0.00	0.00	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.02	11	0.00	0.00	0.05	B	36, 68, 177
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	B	36, 68
			(-)-Epigallocatechin	0.00	8		0.00	0.00	B	36, 68
			(-)-Epigallocatechin 3-gallate	0.00	8		0.00	0.00	B	36, 68
			(+)-Catechin	0.15	10	0.02	0.00	0.43	B	36, 68, 177
			(+)-Gallocatechin	0.00	8		0.00	0.00	B	36, 68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68
Quercetin	0.93		8	0.41	0.00	3.20	A	68		
99053	Garlic chives, raw ( <i>Allium sativum</i> )	Flavonols	Kaempferol	2.12	1		2.12	2.12	C	18
			Quercetin	0.12	1		0.12	0.12	C	18
09107	Gooseberries, raw ( <i>Ribes spp.</i> )	Anthocyanidins	Cyanidin	3.61	4	1.70	0.05	6.57	C	191
			Peonidin	0.13	3	0.03	0.07	0.18	C	191
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	1.67	4		1.67	1.67	B	8
			(+)-Gallocatechin	0.44	4		0.44	0.44	B	8
		Flavones	Apigenin	0.00	2		0.00	0.00	C	102
			Luteolin	0.00	2		0.00	0.00	C	102
		Flavonols	Kaempferol	0.88	4	0.51	0.00	1.90	C	67, 102
Myricetin	0.00		4		0.00	0.00	C	67, 102		
Quercetin	1.23		4	0.49	0.00	2.20	C	67, 102		
11220	Gourd, dishcloth (towelgourd), raw ( <i>Luffa aegyptiaca</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	30
			Luteolin	0.01	1		0.01	0.01	D	30
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	30
			Myricetin	0.13	1		0.13	0.13	D	30
			Quercetin	0.03	1		0.03	0.03	D	30

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09135	Grape juice, canned or bottled, unsweetened, without added vitamin C	Anthocyanidins	Cyanidin	0.56	2		0.56	0.56	C	48
			Delphinidin	0.47	2		0.47	0.47	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	B	9
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	B	9
			(-)-Epigallocatechin	0.00	1		0.00	0.00	B	9
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	B	9
			(+)-Catechin	0.19	1		0.19	0.19	B	9
			(+)-Gallocatechin	0.00	1		0.00	0.00	B	9
		Flavones	Apigenin	0.01	3	0.00	0.00	0.01	B	48, 73
			Luteolin	0.01	3	0.00	0.00	0.02	B	48, 73
		Flavonols	Kaempferol	0.01	3	0.00	0.00	0.01	B	48, 73
Myricetin	0.21		3	0.18	0.03	0.58	B	48, 73		
Quercetin	0.64		3	0.28	0.41	0.75	B	48, 73		
99050	Grape juice, white	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	164
			(+)-Catechin	0.16	1		0.16	0.16	C	164
		Flavonols	Quercetin	0.36	1		0.36	0.36	C	164
97003	Grape seeds, raw ( <i>Vitis vinifera</i> )	Flavan-3-ols	(-)-Epicatechin	93.31	35	8.42	23.00	284.00	C	50, 195
			(+)-Catechin	74.63	35	5.78	6.00	244.00	C	50, 195
09404	Grapefruit juice, pink, raw	Flavanones	Eriodictyol	0.00	24		0.00	0.00	C	14, 114
			Hesperetin	0.78	28	0.11	0.44	2.32	B	14, 37, 114
			Naringenin	17.19	28	1.91	9.67	62.58	B	14, 37, 114
		Flavones	Apigenin	0.00	1		0.00	0.00	D	14
Flavonols	Quercetin	0.00	1		0.00	0.00	D	14		
09123	Grapefruit juice, white, canned, unsweetened	Flavanones	Hesperetin	1.15	3	0.34	0.52	1.68	C	12, 149
			Naringenin	18.07	528	0.78	5.20	26.33	B	12, 41, 149, 150
		Flavonols	Quercetin	0.90	2	0.25	0.65	1.16	C	12
09126	Grapefruit juice, white, frozen concentrate, unsweetened, diluted with 3 volume water	Flavanones	Naringenin	31.18	2	0.71	30.48	31.89	C	24
09128	Grapefruit juice, white, raw	Flavanones	Eriodictyol	0.65	29	0.38	0.00	11.36	B	14, 114, 115
			Hesperetin	3.42	29	1.42	0.00	34.93	B	14, 114, 115
			Naringenin	20.06	32	1.83	0.00	58.03	B	13, 14, 114, 115
		Flavones	Apigenin	0.00	9		0.00	0.00	C	14, 73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	73
Myricetin	0.05		1		0.05	0.05	C	73		
Quercetin	0.05		9	0.05	0.00	0.47	C	14, 73		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
99347	Grapefruit, raw (not specified as to color) ( <i>Citrus paradisi</i> )	Flavanones	Hesperetin	1.50	2		1.50	1.50	C	81
			Naringenin	53.00	2		53.00	53.00	C	81
		Flavonols	Kaempferol	0.40	2		0.40	0.40	C	81
			Quercetin	0.50	2		0.50	0.50	C	81
09112	Grapefruit, raw, pink and red, all areas ( <i>Citrus paradisi</i> )	Anthocyanidins	Cyanidin	0.00	7		0.00	0.00	A	68
			Delphinidin	0.00	7		0.00	0.00	A	68
			Malvidin	0.00	7		0.00	0.00	A	68
			Pelargonidin	0.00	7		0.00	0.00	A	68
			Peonidin	0.00	7		0.00	0.00	A	68
			Petunidin	0.00	7		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	A	68
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(+)-Catechin	0.00	7		0.00	0.00	A	68
			(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
		Flavanones	Hesperetin	0.35	10	0.04	0.00	1.17	A	48, 68
			Naringenin	32.64	9	6.62	16.28	44.97	A	48, 68
		Flavones	Apigenin	0.00	10	0.00	0.00	0.01	A	48, 68
			Luteolin	0.60	7	0.12	0.00	1.40	A	48, 68
		Flavonols	Kaempferol	0.01	3		0.01	0.01	B	48
			Myricetin	0.01	10	0.00	0.00	0.03	A	48, 68
Quercetin	0.33		10	0.19	0.00	2.02	A	48, 68		
09116	Grapefruit, raw, white, all areas ( <i>Citrus paradisi</i> )	Flavanones	Hesperetin	0.64	2		0.64	0.64	C	48
			Naringenin	21.34	2		21.34	21.34	C	48
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	0.00	1		0.00	0.00	C	102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Myricetin	0.00	1		0.00	0.00	C	102
Quercetin	0.00		1		0.00	0.00	C	102		
99048	Grapes, black ( <i>Vitis vinifera</i> )	Flavan-3-ols	(-)-Epicatechin	8.68	11	2.48	8.64	8.70	B	8, 177
			(-)-Epicatechin 3-gallate	2.81	4		2.81	2.81	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	10.14	11	2.91	8.94	10.83	B	8, 177
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	1		0.00	0.00	C	74
			Luteolin	0.00	1		0.00	0.00	C	74
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	74

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Myricetin	0.45	1		0.45	0.45	C	74
			Quercetin	2.54	4	0.83	1.26	3.70	B	74, 81, 124
99049	Grapes, black, juice	Flavan-3-ols	(-)-Epicatechin	0.00	2		0.00	0.00	B	9
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(+)-Catechin	0.80	2	0.05	0.75	0.85	B	9
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	9
97074	Grapes, red, raw ( <i>Vitis vinifera</i> )	Anthocyanidins	Cyanidin	1.46	24	0.56	0.17	13.16	B	48, 143, 190
			Delphinidin	3.67	24	1.53	0.16	39.58	B	48, 143, 190
			Malvidin	34.71	22	5.57	1.39	56.72	B	143, 190
			Pelargonidin	0.02	2		0.02	0.02	C	48
			Peonidin	2.89	22	0.46	1.28	9.59	B	143, 190
			Petunidin	2.11	22	0.14	0.17	8.78	B	143, 190
		Flavan-3-ols	(-)-Epicatechin	1.20	5	0.22	0.70	2.14	C	36, 123
			(-)-Epicatechin 3-gallate	0.17	3		0.17	0.17	C	36
			(-)-Epigallocatechin	0.08	3		0.08	0.08	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.82	3		0.82	0.82	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavones	Apigenin	0.00	4	0.00	0.00	0.01	C	48, 102
			Luteolin	1.30	4	0.00	0.00	2.60	C	48, 102
		Flavonols	Kaempferol	0.00	4	0.00	0.00	0.01	C	48, 102
			Myricetin	0.01	4	0.00	0.00	0.03	C	48, 102
			Quercetin	1.38	6	0.69	0.00	3.98	B	48, 102, 123
99047	Grapes, white or green, raw ( <i>Vitis vinifera</i> )	Flavan-3-ols	(-)-Epicatechin	1.70	14	0.42	0.07	2.78	B	8, 36, 177
		Flavan-3-ols	(-)-Epicatechin 3-gallate	0.25	7	0.08	0.00	0.43	B	8, 36
			(-)-Epigallocatechin	0.02	7	0.00	0.00	0.04	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(+)-Catechin	3.73	14	0.92	0.39	5.89	B	8, 36, 177
			(+)-Gallocatechin	0.01	7	0.00	0.00	0.03	B	8, 36
		Flavones	Apigenin	0.00	3		0.00	0.00	C	74, 102
			Luteolin	0.00	3		0.00	0.00	C	74, 102
		Flavonols	Kaempferol	0.00	3		0.00	0.00	C	74, 102
			Myricetin	0.30	3	0.11	0.00	0.45	C	74, 102
			Quercetin	1.62	4	0.71	0.20	3.87	B	74, 81, 102
99016	Greek greens pie (prepared from wild greens)	Flavones	Apigenin	0.00	1		0.00	0.00	B	175
			Luteolin	6.60	1		6.60	6.60	B	175
		Flavonols	Isorhamnetin	1.80	1		1.80	1.80	B	175

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Kaempferol	4.30	1		4.30	4.30	B	175
			Myricetin	1.40	1		1.40	1.40	B	175
			Quercetin	12.40	1		12.40	12.40	B	175
99019	Hartwort, leaves ( <i>Tordylium apulum</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	B	175
			Luteolin	0.60	1		0.60	0.60	B	175
		Flavonols	Isorhamnetin	5.10	1		5.10	5.10	B	175
			Kaempferol	2.90	1		2.90	2.90	B	175
			Myricetin	1.60	1		1.60	1.60	B	175
			Quercetin	29.30	1		29.30	29.30	B	175
99376	Hawthorn leaves, raw ( <i>Crataegus spp.</i> )	Flavones	Apigenin	0.40	1		0.40	0.40	D	162
			Luteolin	0.00	1		0.00	0.00	D	162
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	162
			Myricetin	0.00	1		0.00	0.00	D	162
			Quercetin	24.10	1		24.10	24.10	D	162
99035	Honey, mixed varieties (samples obtained in Australia, Italy, Portugaul and Spain)	Flavones	Apigenin	0.05	2	0.02	0.03	0.07	C	58
			Luteolin	0.63	29	0.08	0.03	3.19	B	58, 193, 194
		Flavonols	Isorhamnetin	0.17	23	0.02	0.04	0.40	B	58, 193, 194
			Kaempferol	0.11	29	0.01	0.05	0.17	B	58, 193, 194
			Myricetin	1.03	22	0.13	0.11	2.73	B	193, 194
			Quercetin	0.51	29	0.05	0.02	1.30	B	58, 193, 194
99079	Horseradish, root, whole ( <i>Armoracia rusticana</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	103
			Luteolin	0.90	1		0.90	0.90	D	103
		Flavonols	Kaempferol	1.58	2	0.99	0.60	2.57	C	18, 103
			Myricetin	0.00	1		0.00	0.00	D	103
			Quercetin	0.28	2	0.29	0.00	0.57	C	18, 103
19719	Jams and preserves, apricot	Flavan-3-ols	(-)-Epicatechin	0.50	1		0.50	0.50	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.47	1		0.47	0.47	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
		Flavonols	Kaempferol	0.11	6	0.01	0.06	0.16	C	173
			Quercetin	0.71	6	0.11	0.31	1.05	C	173
99114	Jams and preserves, cherry	Flavan-3-ols	(-)-Epicatechin	0.90	1		0.90	0.90	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.16	1		0.16	0.16	C	8



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
99113	Jams and preserves, forest fruit	Flavan-3-ols	(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin	1.57	1		1.57	1.57	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.07	1		0.07	0.07	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
99368	Jams and preserves, grape	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.01	2		0.01	0.01	C	48
99387	Jams and preserves, guava	Anthocyanidins	Cyanidin	0.20	2		0.20	0.20	C	48
			Delphinidin	0.02	2		0.02	0.02	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
		Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.01	2		0.01	0.01	C	48
99027	Jams and preserves, peach	Flavonols	Kaempferol	0.26	6	0.11	0.05	0.77	C	173
			Quercetin	0.32	6	0.08	0.12	0.59	C	173
99031	Jams and preserves, plum	Flavonols	Quercetin	0.63	3	0.22	0.18	0.85	C	173
99403	Jams and preserves, raspberry	Flavonols	Kaempferol	0.53	1		0.53	0.53	C	198
			Quercetin	4.30	1		4.30	4.30	C	198
99038	Jams and preserves, sour orange	Flavanones	Eriodictyol	3.03	3	0.43	2.48	3.87	C	173
			Hesperetin	4.02	3	0.45	3.17	4.70	C	173
			Naringenin	4.56	3	0.49	3.72	5.43	C	173
99064	Jams and preserves, strawberry	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.90	1		0.90	0.90	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
		Flavonols	Kaempferol	0.64	6	0.21	0.00	1.07	C	65, 173
			Quercetin	0.45	6	0.05	0.32	0.61	C	65, 173
99406	Jellies, grape	Anthocyanidins	Cyanidin	0.20	2		0.20	0.20	C	48
			Delphinidin	0.02	2		0.02	0.02	C	48

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
99054	Kale, canned	Flavones	Pelargonidin	0.02	2		0.02	0.02	C	48
			Apigenin	0.00	2		0.00	0.00	C	74
			Luteolin	0.00	2		0.00	0.00	C	74
		Flavonols	Kaempferol	18.40	2		18.40	18.40	C	74
			Myricetin	0.00	2		0.00	0.00	C	74
		Quercetin	4.50	2		4.50	4.50	C	74	
99098	Kale, Chinese, raw ( <i>Brassica oleracea</i> var. <i>alboglabra</i> )	Flavones	Apigenin	0.01	1		0.01	0.01	D	30
			Luteolin	0.00	1		0.00	0.00	D	30
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	30
			Myricetin	0.01	1		0.01	0.01	D	30
			Quercetin	0.07	1		0.07	0.07	D	30
11233	Kale, raw ( <i>Brassica oleracea</i> ( <i>Acephala Group</i> ))	Flavones	Apigenin	0.00	2		0.00	0.00	C	74, 103
			Luteolin	0.00	2		0.00	0.00	C	74, 103
		Flavonols	Kaempferol	26.74	8	7.38	0.48	47.00	B	18, 74, 81, 103
			Myricetin	0.00	2		0.00	0.00	C	74, 103
			Quercetin	7.71	8	1.92	0.00	12.00	B	18, 74, 81, 103
09148	Kiwi fruit, (chinese gooseberries), fresh, raw ( <i>Actinidia chinensis</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.27	12	0.05	0.00	0.45	A	8, 36, 68
			(-)-Epicatechin 3-gallate	0.01	12	0.01	0.00	0.08	A	8, 36, 68
			(-)-Epigallocatechin	0.00	12		0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.09	12	0.09	0.00	1.11	A	8, 36, 68
			(+)-Catechin	0.00	12		0.00	0.00	A	8, 36, 68
			(+)-Gallocatechin	0.00	12		0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	3		0.00	0.00	B	68, 102
			Luteolin	1.12	2	1.11	0.00	2.23	B	68, 102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Myricetin	0.00	3		0.00	0.00	B	68, 102
			Quercetin	0.00	3		0.00	0.00	B	68, 102
		97079	Kiwi, gold, raw ( <i>Actinidia chinensis</i> )	Anthocyanidins	Cyanidin	0.00	1		0.00	0.00
Delphinidin	0.00				1		0.00	0.00	B	68
Malvidin	0.00				1		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Pelargonidin	0.00	1		0.00	0.00	B	68
			Peonidin	0.00	1		0.00	0.00	B	68
			Petunidin	0.00	1		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.64	1		0.64	0.64	B	68
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(+)-Catechin	0.00	1		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	1		0.00	0.00	B	68
			Flavanones	Hesperetin	0.00	1		0.00	0.00	B
		Naringenin		0.00	1		0.00	0.00	B	68
		Flavones	Apigenin	0.00	1		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	1		0.00	0.00	B	68
Quercetin	0.00		1		0.00	0.00	B	68		
11241	Kohlrabi, raw ( <i>Brassica oleracea</i> ( <i>Gongylodes</i> Group))	Flavones	Apigenin	0.00	1		0.00	0.00	D	103
			Luteolin	1.30	1		1.30	1.30	D	103
		Flavonols	Kaempferol	2.43	1		2.43	2.43	D	103
			Myricetin	0.00	1		0.00	0.00	D	103
			Quercetin	0.40	1		0.40	0.40	D	103
09149	Kumquats, raw ( <i>Fortunella</i> spp.)	Flavanones	Naringenin	57.39	3		57.39	57.39	C	151
		Flavones	Apigenin	21.87	3		21.87	21.87	C	151
11246	Leeks, (bulb and lower leaf-portion), raw ( <i>Allium ampeloprasum</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	5		0.00	0.00	C	74, 103
			Luteolin	0.00	5		0.00	0.00	C	74, 103
		Flavonols	Kaempferol	2.95	9	0.63	0.64	4.58	B	18, 74, 75, 81, 103
			Myricetin	0.00	5		0.00	0.00	C	74, 103
Quercetin	0.10		7	0.07	0.00	0.50	B	18, 74, 75, 103		
99112	Lemon balm, leaves, raw ( <i>Melissa officinalis</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	0.00	1		0.00	0.00	C	80
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	1		0.00	0.00	C	80
			Quercetin	0.00	1		0.00	0.00	C	80

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09153	Lemon juice, canned or bottled	Flavanones	Eriodictyol	10.56	40	0.57	3.77	19.01	B	63, 107
			Hesperetin	13.43	41	0.95	0.70	20.63	B	12, 63, 107
			Naringenin	0.00	1		0.00	0.00	C	12
		Flavones	Luteolin	1.83	18	0.34	0.70	3.02	B	107
		Flavonols	Quercetin	0.00	1		0.00	0.00	C	12
09152	Lemon juice, raw	Flavan-3-ols	(+)-Catechin	0.00	1		0.00	0.00	C	1
		Flavanones	Eriodictyol	4.88	31	0.19	0.00	14.70	B	14, 63, 114
			Hesperetin	14.47	32	4.83	1.90	142.24	B	1, 14, 63, 114
			Naringenin	1.38	28	0.72	0.00	18.22	B	1, 14, 114
		Flavones	Apigenin	0.00	10		0.00	0.00	C	14, 73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	1, 73
			Myricetin	0.03	2	0.03	0.00	0.05	C	1, 73
Quercetin	0.37		10	0.21	0.00	1.81	B	1, 14, 73		
09150	Lemons, raw, without peel ( <i>Citrus limon</i> )	Flavanones	Eriodictyol	21.36	2	3.76	17.60	25.13	C	110, 182
			Hesperetin	27.90	3	10.80	17.00	49.51	C	81, 110, 182
			Naringenin	0.55	2	0.05	0.50	0.60	C	81, 110
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	1.90	2	0.40	1.50	2.31	C	102, 110
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Myricetin	0.00	1		0.00	0.00	C	102
			Quercetin	1.52	3	1.02	0.00	3.47	C	102, 110, 182
16069	Lentils, raw ( <i>Lens culinaris</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.35	3		0.35	0.35	C	36
			(+)-Gallocatechin	0.14	3		0.14	0.14	C	36
			11250	Lettuce, butterhead (includes boston and bibb types), raw ( <i>Lactuca sativa var. capitata</i> )	Anthocyanidins	Cyanidin	0.00	8		0.00
Delphinidin	0.00	8					0.00	0.00	A	68
Malvidin	0.00	8					0.00	0.00	A	68
Pelargonidin	0.00	8					0.00	0.00	A	68
Peonidin	0.00	8					0.00	0.00	A	68
Petunidin	0.00	8					0.00	0.00	A	68
Flavan-3-ols	(-)-Epicatechin	0.00			4		0.00	0.00	B	68
	(-)-Epicatechin 3-gallate	0.00			4		0.00	0.00	B	68
	(-)-Epigallocatechin	0.00			4		0.00	0.00	B	68
	(-)-Epigallocatechin 3-gallate	0.00			4		0.00	0.00	B	68
	(+)-Catechin	0.00			3		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
		Flavanones	(+)-Gallocatechin	0.00	4		0.00	0.00	B	68		
			Hesperetin	0.00	4		0.00	0.00	B	68		
			Naringenin	0.00	4		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68		
			Luteolin	0.00	4		0.00	0.00	B	68		
		Flavonols	Kaempferol	0.02	3	0.01	0.00	0.04	C	18		
			Myricetin	0.00	8		0.00	0.00	A	68		
			Quercetin	2.73	15	0.94	0.00	14.56	B	18, 68, 117		
		11251	Lettuce, cos or romaine, raw ( <i>Lactuca sativa</i> var. <i>logifolia</i> )	Anthocyanidins	Cyanidin	0.00	11		0.00	0.00	A	44, 68
Delphinidin	0.00				8		0.00	0.00	A	68		
Malvidin	0.00				8		0.00	0.00	A	68		
Pelargonidin	0.00				8		0.00	0.00	A	68		
Peonidin	0.00				8		0.00	0.00	A	68		
Petunidin	0.00				8		0.00	0.00	A	68		
Flavan-3-ols	(-)-Epicatechin			0.00	6		0.00	0.00	A	68		
	(-)-Epicatechin 3-gallate			0.00	6		0.00	0.00	A	68		
	(-)-Epigallocatechin			0.00	6		0.00	0.00	A	68		
	(-)-Epigallocatechin 3-gallate			0.00	6		0.00	0.00	A	68		
	(+)-Catechin			0.00	6		0.00	0.00	A	68		
	(+)-Gallocatechin			0.00	6		0.00	0.00	A	68		
Flavanones	Hesperetin			0.00	6		0.00	0.00	A	68		
	Naringenin			0.00	6		0.00	0.00	A	68		
Flavones	Apigenin			0.00	8		0.00	0.00	A	68		
	Luteolin			0.06	7	0.01	0.00	0.13	B	44, 68		
Flavonols	Myricetin			0.00	8		0.00	0.00	A	68		
	Quercetin			4.49	11	0.84	1.04	8.78	A	44, 68		
11253	Lettuce, green leaf, raw ( <i>Lactuca sativa</i> var. <i>crispa</i> )			Anthocyanidins	Cyanidin	0.29	27	0.08	0.00	2.65	B	6, 44, 68
					Delphinidin	0.00	8		0.00	0.00	A	68
					Malvidin	0.00	8		0.00	0.00	A	68
		Pelargonidin	0.00		8		0.00	0.00	A	68		
		Peonidin	0.00		8		0.00	0.00	A	68		
		Petunidin	0.00		8		0.00	0.00	A	68		
		Flavan-3-ols	(-)-Epicatechin	0.00	2		0.00	0.00	B	68		
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	68		
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	68		
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	68		
			(+)-Catechin	0.00	2		0.00	0.00	B	68		
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	68		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavanones	Hesperetin	0.00	2		0.00	0.00	B	68
			Naringenin	0.00	2		0.00	0.00	B	68
		Flavones	Apigenin	0.16	14	0.16	0.00	2.30	B	6, 10, 30, 68
			Luteolin	0.50	25	0.04	0.00	2.33	B	6, 10, 30, 44, 68
		Flavonols	Kaempferol	0.02	10	0.02	0.00	0.20	B	6, 10, 18, 30
			Myricetin	0.09	10	0.09	0.00	0.90	B	10, 30, 68
			Quercetin	5.63	39	0.64	0.04	20.60	B	6, 10, 18, 30, 44, 68, 117
11252	Lettuce, iceberg (includes crisphead types), raw ( <i>Lactuca sativa</i> var. <i>capitata</i> )	Anthocyanidins	Cyanidin	0.00	11		0.00	0.00	A	44, 68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	8		0.00	0.00	A	8, 68
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	A	8, 68
			(-)-Epigallocatechin	0.00	8		0.00	0.00	A	8, 68
			(-)-Epigallocatechin 3-gallate	0.00	8		0.00	0.00	A	8, 68
			(+)-Catechin	0.00	7		0.00	0.00	B	8, 68
			(+)-Gallocatechin	0.00	8		0.00	0.00	A	8, 68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.13	21	0.13	0.00	2.65	B	48, 68, 74, 103
			Luteolin	0.03	20	0.02	0.00	0.39	B	44, 48, 68, 74, 103
		Flavonols	Kaempferol	0.15	19	0.03	0.00	0.84	B	18, 48, 74, 103
			Myricetin	0.06	21	0.05	0.00	1.02	B	48, 68, 74, 103
Quercetin	1.42		37	0.18	0.00	9.40	B	18, 34, 44, 48, 68, 74, 75, 103		
11257	Lettuce, red leaf, raw ( <i>Lactuca sativa</i> var. <i>crispa</i> )	Anthocyanidins	Cyanidin	2.77	20	1.32	0.00	20.80	B	6, 44, 68, 190
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	10		0.00	0.00	B	6, 68
			Luteolin	1.58	9	0.95	0.00	8.80	B	6, 44, 68
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	6
			Myricetin	0.00	8		0.00	0.00	A	68
			Quercetin	11.99	14	3.36	2.01	44.90	B	6, 44, 68, 117
99104	Licorice root ( <i>Glycyrrhiza glabra L</i> )	Flavonols	Quercetin	0.00	1		0.00	0.00	D	70
09160	Lime juice, raw	Flavanones	Eriodictyol	2.19	20	0.41	0.00	3.52	C	14, 114
			Hesperetin	8.97	20	0.06	5.18	21.37	C	14, 114
			Naringenin	0.38	23	0.20	0.00	4.62	B	14, 114, 197
		Flavones	Apigenin	0.00	6		0.00	0.00	C	14
		Flavonols	Quercetin	0.51	6	0.33	0.00	1.78	C	14
09159	Limes, raw ( <i>Citrus latifolia</i> )	Flavanones	Hesperetin	43.00	1		43.00	43.00	C	81
			Naringenin	3.40	1		3.40	3.40	C	81
		Flavonols	Quercetin	0.40	1		0.40	0.40	C	81
99021	Lingonberries (cowberries), raw ( <i>Vaccinium vitis-idaea</i> )	Anthocyanidins	Cyanidin	44.21	1		44.21	44.21	C	83
		Flavonols	Kaempferol	0.17	3	0.17	0.00	0.50	C	67, 81
			Myricetin	0.00	2		0.00	0.00	C	67
			Quercetin	12.97	11	1.99	7.36	21.00	B	65, 67, 81, 110
99067	Lingonberry juice	Flavonols	Quercetin	1.02	2	0.08	0.93	1.10	C	65
99404	Locust bean powder	Flavonols	Kaempferol	0.53	1		0.53	0.53	C	125
			Myricetin	0.00	1		0.00	0.00	C	125
			Quercetin	3.33	1		3.33	3.33	C	125
99111	Lovage, leaves, raw ( <i>Levisticum</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	0.00	1		0.00	0.00	C	80
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Quercetin	170.00	1		170.00	170.00	C	80
20100	Macaroni, cooked, enriched	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
09176	Mangos, raw ( <i>Mangifera indica</i> )	Anthocyanidins	Cyanidin	0.10	1		0.10	0.10	C	48
			Delphinidin	0.02	1		0.02	0.02	C	48

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavan-3-ols	Pelargonidin	0.02	1		0.02	0.02	C	48
			(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	1.72	4		1.72	1.72	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
Quercetin	0.00		2		0.00	0.00	C	48		
99022	Marrowfat pea, canned, drained solids	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	5.64	1		5.64	5.64	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	4.33	1		4.33	4.33	C	8
97005	Medlar ( <i>Mespilus germanica</i> )	Flavan-3-ols	(-)-Epicatechin	0.53	3		0.53	0.53	C	36
			(-)-Epicatechin 3-gallate	0.23	3		0.23	0.23	C	36
			(-)-Epigallocatechin	0.01	3		0.01	0.01	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.02	3		0.02	0.02	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
09181	Melons, cantaloupe, raw ( <i>Cucumis melo</i> )	Anthocyanidins	Cyanidin	0.00	3		0.00	0.00	B	68
			Delphinidin	0.00	3		0.00	0.00	B	68
			Malvidin	0.00	3		0.00	0.00	B	68
			Pelargonidin	0.00	3		0.00	0.00	B	68
			Peonidin	0.00	3		0.00	0.00	B	68
			Petunidin	0.00	3		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	10		0.00	0.00	A	68, 177
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(+)-Catechin	0.00	10		0.00	0.00	A	68, 177
			(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	5		0.00	0.00	B	68, 102, 152



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Luteolin	0.64	4	0.64	0.00	2.58	B	68, 102, 152
			Kaempferol	0.00	2		0.00	0.00	C	102, 152
			Myricetin	0.00	5		0.00	0.00	B	68, 102, 152
			Quercetin	0.00	5		0.00	0.00	B	68, 102, 152
09184	Melons, honeydew, raw ( <i>Cucumis melo</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.01	5	0.01	0.00	0.03	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.04	5	0.04	0.00	0.22	B	68
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	68
			Quercetin	0.00	2		0.00	0.00	B	68
01103	Milk, chocolate, fluid, commercial, reduced fat	Flavan-3-ols	(-)-Epicatechin	0.26	2	0.21	0.06	0.47	B	9
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	9
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	9
			(+)-Catechin	0.82	2	0.71	0.11	1.53	B	9
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	9
		Flavones	Apigenin	0.00	1		0.00	0.00	C	73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	73
			Myricetin	0.05	1		0.05	0.05	C	73
			Quercetin	0.12	1		0.12	0.12	C	73
99374	Mizuna (Japanese mustard) ( <i>Brassica rapa</i> <i>supsp. nipposinica</i> )	Flavonols	Isorhamnetin	0.24	6	0.06	0.00	0.48	C	151
			Kaempferol	0.95	6	0.25	0.00	1.91	C	151
			Quercetin	2.01	6	0.52	0.00	4.02	C	151
09190	Mulberries, raw ( <i>Morus nigra</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	C	102
		Flavones	Luteolin	0.00	1		0.00	0.00	C	102
			Kaempferol	0.00	1		0.00	0.00	C	102

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
			Quercetin	2.47	1		2.47	2.47	C	102		
11264	Mushrooms, canned, drained solids	Flavones	Apigenin	0.00	4		0.00	0.00	B	74		
			Luteolin	0.00	4		0.00	0.00	B	74		
			Quercetin	0.00	4		0.00	0.00	B	74		
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74		
			Myricetin	0.00	4		0.00	0.00	B	74		
11260	Mushrooms, raw ( <i>Agaricus bisporus</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8		
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8		
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8		
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8		
			(+)-Catechin	0.00	4		0.00	0.00	B	8		
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8		
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74		
			Luteolin	0.00	4		0.00	0.00	B	74		
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74		
			Myricetin	0.00	4		0.00	0.00	B	74		
			Quercetin	0.00	4		0.00	0.00	B	74		
		99373	Nalta jute, raw ( <i>Corchorus olitorius</i> )	Flavonols	Kaempferol	3.42	6	1.22	2.43	4.40	C	151
					Quercetin	24.88	6	8.14	9.24	40.53	C	151
09191	Nectarines, raw ( <i>Prunus persica</i> var. <i>nucipersica</i> )	Anthocyanidins	Cyanidin	1.81	45	0.08	0.00	4.85	B	68, 172, 190		
			Delphinidin	0.00	8		0.00	0.00	A	68		
			Malvidin	0.00	8		0.00	0.00	A	68		
			Pelargonidin	0.00	8		0.00	0.00	A	68		
			Peonidin	0.00	8		0.00	0.00	A	68		
			Petunidin	0.00	8		0.00	0.00	A	68		
		Flavan-3-ols	(-)-Epicatechin	2.54	41	0.28	0.00	5.88	B	8, 68, 172		
			(-)-Epicatechin 3-gallate	0.00	11		0.00	0.00	A	8, 68		
			(-)-Epigallocatechin	0.00	11		0.00	0.00	A	8, 68		
			(-)-Epigallocatechin 3-gallate	0.00	11		0.00	0.00	A	8, 68		
			(+)-Catechin	2.98	41	0.28	0.14	9.39	B	8, 68, 172		
			(+)-Gallocatechin	0.00	12		0.00	0.00	A	8, 68		
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68		
			Naringenin	0.00	7		0.00	0.00	A	68		
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68		
			Luteolin	0.00	4		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68		
Quercetin	0.69		38	0.05	0.00	2.08	B	68, 172				
97049	Nectarines, white, whole,	Anthocyanidins	Cyanidin	0.74	30	0.10	0.29	1.44	B	172		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	raw ( <i>Prunus persica</i> var. <i>nucipersica</i> )	Flavan-3-ols	(-)-Epicatechin	3.06	30	0.45	1.75	5.39	B	172
			(+)-Catechin	7.58	30	0.82	0.12	24.29	B	172
		Flavonols	Quercetin	0.37	30	0.05	0.10	0.66	B	172
12061	Nuts, almonds ( <i>Prunus dulcis</i> )	Anthocyanidins	Cyanidin	2.46	8	0.58	0.00	4.40	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.60	12	0.10	0.00	1.27	B	68, 112
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin	2.59	3	0.31	1.97	2.98	B	68
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(+)-Catechin	1.28	12	0.33	0.00	3.86	B	68, 112
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	68
		Flavanones	Eriodictyol	0.25	8	0.06	0.03	0.57	B	112
			Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.13	12	0.03	0.00	0.34	B	68, 112
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Isorhamnetin	7.05	8	1.03	1.20	10.32	B	112
			Kaempferol	0.52	8	0.05	0.35	0.71	C	112
			Myricetin	0.00	8		0.00	0.00	A	68
Quercetin	0.36		16	0.11	0.00	1.09	B	68, 112		
12078	Nuts, brazilnuts, dried, unblanched ( <i>Bertholletia excelsa</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	2		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(+)-Catechin	0.00	2		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	2		0.00	0.00	B	68
			Naringenin	0.00	2		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Luteolin	0.00	1		0.00	0.00	B	68
			Myricetin	0.00	2		0.00	0.00	B	68
			Quercetin	0.00	2		0.00	0.00	B	68
12086	Nuts, cashew nuts, oil roasted, without salt added	Anthocyanidins	Cyanidin	0.00	7		0.00	0.00	A	68
			Delphinidin	0.00	7		0.00	0.00	A	68
			Malvidin	0.00	7		0.00	0.00	A	68
			Pelargonidin	0.00	7		0.00	0.00	A	68
			Peonidin	0.00	7		0.00	0.00	A	68
			Petunidin	0.00	7		0.00	0.00	A	68
			Flavan-3-ols	(-)-Epicatechin	0.93	6	0.22	0.00	1.44	A
		(-)-Epicatechin 3-gallate		0.15	6	0.10	0.00	0.59	A	68
		(-)-Epigallocatechin		0.00	6		0.00	0.00	A	68
		(-)-Epigallocatechin 3-gallate		0.00	6		0.00	0.00	A	68
		(+)-Catechin		0.90	6	0.28	0.00	1.79	A	68
		(+)-Gallocatechin		0.00	6		0.00	0.00	A	68
		Flavanones	Hesperetin	0.00	6		0.00	0.00	A	68
			Naringenin	0.00	6		0.00	0.00	A	68
		Flavones	Apigenin	0.00	7		0.00	0.00	A	68
			Luteolin	0.00	3		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	7		0.00	0.00	A	68
Quercetin	0.00		7		0.00	0.00	A	68		
12098	Nuts, chestnuts, European, raw, peeled ( <i>Castanea sativa</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.01	3		0.01	0.01	C	36
			(+)-Gallocatechin	0.01	3		0.01	0.01	C	36
12120	Nuts, hazelnuts or filberts ( <i>Corylus spp.</i> )	Anthocyanidins	Cyanidin	6.71	7	1.18	4.40	13.60	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.22	5	0.09	0.00	0.44	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	2.78	5	1.21	0.00	5.54	B	68
			(-)-Epigallocatechin 3-gallate	1.06	5	0.46	0.00	2.26	B	68
			(+)-Catechin	1.19	5	0.49	0.00	2.09	B	68
(+)-Gallocatechin	0.00	5		0.00	0.00	B	68			

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68
			Quercetin	0.00	8		0.00	0.00	A	68
12131	Nuts, macadamia nuts, raw ( <i>Macadamia integrifolia</i> , <i>M. tetraphylla</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	2		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	2		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(+)-Catechin	0.00	2		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	2		0.00	0.00	B	68
			Naringenin	0.00	2		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	68
Quercetin	0.00		2		0.00	0.00	B	68		
12142	Nuts, pecans ( <i>Carya illinoensis</i> )	Anthocyanidins	Cyanidin	10.74	7	1.50	6.21	17.40	A	68
			Delphinidin	7.28	7	0.92	3.99	9.90	A	68
			Malvidin	0.00	7		0.00	0.00	A	68
			Pelargonidin	0.00	7		0.00	0.00	A	68
			Peonidin	0.00	7		0.00	0.00	A	68
			Petunidin	0.00	7		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.82	7	0.08	0.48	1.17	A	68
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	5.63	7	1.47	0.00	13.20	A	68
			(-)-Epigallocatechin 3-gallate	2.30	7	0.46	0.00	3.46	A	68
			(+)-Catechin	7.24	7	0.51	4.89	9.17	A	68
			(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Apigenin	0.00	7		0.00	0.00	A	68
			Luteolin	0.00	3		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	7		0.00	0.00	A	68
			Quercetin	0.00	7		0.00	0.00	A	68
12149	Nuts, pine nuts, pinyon, dried ( <i>Pinus edulis</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	B	68
			Delphinidin	0.00	2		0.00	0.00	B	68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.00	2		0.00	0.00	B	68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(-)-Epigallocatechin	0.49	3	0.25	0.00	0.75	B	68
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(+)-Catechin	0.00	3		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	3		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	3		0.00	0.00	B	68
			Naringenin	0.00	3		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2		0.00	0.00	B	68
			Luteolin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	2		0.00	0.00	B	68
			Quercetin	0.00	2		0.00	0.00	B	68
12151	Nuts, pistachio nuts, raw ( <i>Pistacia vera</i> )	Anthocyanidins	Cyanidin	6.06	15	0.79	3.15	14.30	B	68, 190
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.83	7	0.46	0.00	3.15	A	68
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	2.05	7	0.82	0.00	5.65	A	68
			(-)-Epigallocatechin 3-gallate	0.40	7	0.40	0.00	2.83	A	68
			(+)-Catechin	3.57	7	1.00	0.00	6.39	A	68
			(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Quercetin	1.46	8	0.64	0.00	4.30	A	68
99409	Nuts, walnuts (not specified at to type, purchased in Hungary) ( <i>Juglans spp.</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	0.00	1		0.00	0.00	C	102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Quercetin	0.00	1		0.00	0.00	C	102
12155	Nuts, walnuts, english ( <i>Juglans regia</i> )	Anthocyanidins	Cyanidin	2.71	6	0.25	2.11	3.74	A	68
			Delphinidin	0.00	6		0.00	0.00	A	68
			Malvidin	0.00	6		0.00	0.00	A	68
			Pelargonidin	0.00	6		0.00	0.00	A	68
			Peonidin	0.00	6		0.00	0.00	A	68
			Petunidin	0.00	6		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(+)-Catechin	0.00	4		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.00	6		0.00	0.00	A	68
			Luteolin	0.00	2		0.00	0.00	B	68
Flavonols	Myricetin	0.00	6		0.00	0.00	A	68		
	Quercetin	0.00	6		0.00	0.00	A	68		
11278	Okra, raw ( <i>Abelmoschus esculentus</i> )	Flavonols	Quercetin	24.26	9	6.88	19.63	33.22	B	151
99401	Olive leaves, raw ( <i>Olea europaea</i> )	Flavones	Apigenin	2.84	1		2.84	2.84	D	162
			Luteolin	27.70	1		27.70	27.70	D	162
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	162
			Myricetin	1.43	1		1.43	1.43	D	162
09193	Olives, ripe, canned (small-extra large) ( <i>Olea europaea</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
99383	Onion, spring, red, leaves ( <i>Allium cepa</i> or <i>Allium fistulosum</i> )	Flavonols	Kaempferol	4.10	1		4.10	4.10	D	119
			Quercetin	12.60	1		12.60	12.60	D	119

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
11283	Onions, cooked, boiled, drained, without salt	Flavonols	Kaempferol	0.34	28	0.06	0.29	0.41	C	45		
			Quercetin	24.36	32	3.93	19.87	31.00	B	45, 106		
11282	Onions, raw ( <i>Allium cepa</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	B	8, 36		
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36		
			(-)-Epigallocatechin	0.00	7		0.00	0.00	B	8, 36		
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36		
			(+)-Catechin	0.00	7		0.00	0.00	B	8, 36		
			(+)-Gallocatechin	0.00	7		0.00	0.00	B	8, 36		
		Flavones	Apigenin	0.01	18	0.00	0.00	0.00	0.01	B	48, 74, 103, 152	
			Luteolin	0.01	18	0.00	0.00	0.00	0.02	B	48, 74, 103, 152	
		Flavonols	Isorhamnetin	5.01	43	0.69	1.26	7.16	C	109, 179		
			Kaempferol	0.62	24	0.11	0.00	1.00	B	19, 45, 48, 74, 75, 103, 152		
			Myricetin	0.02	18	0.00	0.00	0.03	B	48, 74, 103, 152		
			Quercetin	21.42	408	0.55	1.50	118.70	B	19, 45, 48, 74, 75, 81, 99, 103, 106, 109, 110, 126, 127, 133, 152, 179, 192		
99055	Onions, red, raw ( <i>Allium cepa</i> )	Anthocyanidins	Cyanidin	6.16	13	1.38	1.23	23.99	B	6, 47, 48, 56, 190		
			Delphinidin	2.28	7	0.79	0.10	3.15	C	48, 56		
			Pelargonidin	0.02	2		0.02	0.02	C	48		
			Peonidin	1.22	1		1.22	1.22	C	190		
		Flavones	Apigenin	0.35	6	0.35	0.00	2.10	B	6, 10, 48, 103		
			Luteolin	0.19	6	0.18	0.00	1.10	B	6, 10, 48, 103		
		Flavonols	Isorhamnetin	4.25	40	0.26	0.00	22.60	B	47, 109, 179		
			Kaempferol	1.10	7	0.65	0.00	4.50	B	6, 10, 19, 48, 103		
			Myricetin	2.70	4	0.61	0.00	3.80	C	10, 48, 103		
			Quercetin	33.43	124	2.38	0.00	191.70	B	6, 10, 19, 34, 47, 48, 56, 81, 99, 103, 109, 110, 127, 132, 133, 179, 192		
		11291	Onions, spring or scallions (includes tops and bulb), raw ( <i>Allium cepa</i> or <i>Allium fistulosum</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	103
					Luteolin	0.00	1		0.00	0.00	D	103
Flavonols	Kaempferol			1.16	4	0.76	0.00	3.45	C	81, 103, 119		
	Myricetin			0.00	1		0.00	0.00	D	103		
	Quercetin			18.33	4	1.78	6.71	30.60	C	81, 103, 119		
11294	Onions, sweet, raw ( <i>Allium cepa</i> )	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68		
			Delphinidin	0.00	8		0.00	0.00	A	68		
			Malvidin	0.00	8		0.00	0.00	A	68		
			Pelargonidin	0.00	8		0.00	0.00	A	68		
			Peonidin	0.00	8		0.00	0.00	A	68		
			Petunidin	0.00	8		0.00	0.00	A	68		



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.08	5	0.08	0.00	0.41	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	11	0.00	0.00	0.01	A	48, 68, 152
			Luteolin	0.01	7	0.00	0.00	0.02	B	48, 68, 152
		Flavonols	Kaempferol	1.03	11	0.22	0.00	1.98	B	19, 48, 152, 159
Myricetin	1.07		16	0.41	0.00	4.13	B	48, 68, 152, 159		
Quercetin	14.80		29	0.67	0.97	46.32	B	19, 48, 68, 127, 152, 159		
11293	Onions, welsh, raw ( <i>Allium fistulosum</i> )	Flavonols	Kaempferol	24.95	6	9.09	22.62	27.28	C	151
99056	Onions, white, raw ( <i>Allium cepa</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6
			Flavones	Apigenin	0.00	3		0.00	0.00	C
		Luteolin		0.00	3		0.00	0.00	C	6, 152
		Flavonols	Isorhamnetin	0.00	3		0.00	0.00	C	179
			Kaempferol	0.00	3		0.00	0.00	C	6, 152
			Myricetin	0.00	1		0.00	0.00	C	152
Quercetin	7.29	82	1.27	0.00	63.40	B	6, 33, 34, 127, 132, 152, 179			
11292	Onions, young green, tops only ( <i>Allium cepa</i> )	Flavones	Apigenin	0.01	3		0.01	0.01	C	48
			Luteolin	0.02	3		0.02	0.02	C	48
		Flavonols	Kaempferol	2.40	3		2.40	2.40	C	48
			Myricetin	0.03	3		0.03	0.03	C	48
			Quercetin	0.01	3		0.01	0.01	C	48
09209	Orange juice, chilled, includes from concentrate	Flavanones	Hesperetin	5.52	10	0.90	2.50	9.62	B	12, 51, 153
			Naringenin	1.55	10	0.39	0.11	3.50	B	12, 51, 153
		Flavonols	Quercetin	0.61	3	0.06	0.50	0.68	C	12
09215	Orange juice, frozen concentrate, unsweetened, diluted with 3 volume water	Flavanones	Hesperetin	26.21	14	1.43	15.35	32.59	A	24, 121, 136
			Naringenin	3.27	14	0.14	2.56	4.38	A	24, 121, 136
99366	Orange juice, pigmented	Anthocyanidins	Cyanidin	3.03	3	1.61	0.77	6.14	C	135
		Flavanones	Hesperetin	9.16	3	0.60	8.24	10.30	C	135
			Naringenin	0.74	3	0.06	0.63	0.82	C	135
09206	Orange juice, raw	Flavanones	Eriodictyol	0.17	127	0.02	0.00	1.88	B	14, 26, 108, 114

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Hesperetin	11.26	194	0.42	2.46	39.20	B	12, 14, 26, 37, 51, 81, 108, 114, 135, 136, 153, 154
			Naringenin	2.19	194	0.10	0.00	6.37	B	12, 14, 26, 37, 51, 81, 108, 114, 135, 136, 153, 154
		Flavones	Apigenin	0.00	20		0.00	0.00	C	14, 73
			Luteolin	0.00	2		0.00	0.00	C	73
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	73
			Myricetin	0.05	2		0.05	0.05	C	73
			Quercetin	0.27	24	0.12	0.00	2.20	B	12, 14, 26, 73
09200	Oranges, raw, all commercial varieties ( <i>Citrus sinensis</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavanones	Hesperetin	27.25	22	4.33	11.74	47.09	B	6, 37, 48, 81, 110, 151
			Naringenin	15.32	22	1.76	3.65	45.42	B	6, 37, 48, 81, 110, 151
		Flavones	Apigenin	0.01	4	0.00	0.00	0.01	C	48, 102
			Luteolin	1.13	4	0.48	0.00	1.50	C	48, 102
		Flavonols	Kaempferol	0.01	4	0.00	0.00	0.01	C	48, 102
			Myricetin	0.02	4	0.01	0.00	0.03	C	48, 102
			Quercetin	0.58	6	0.09	0.00	0.90	B	6, 48, 102
		09202	Oranges, raw, navels ( <i>Citrus sinensis</i> )	Anthocyanidins	Cyanidin	0.00	3		0.00	0.00
Delphinidin	0.00				3		0.00	0.00	B	69
Malvidin	0.00				3		0.00	0.00	B	69
Pelargonidin	0.00				3		0.00	0.00	B	69
Peonidin	0.00				3		0.00	0.00	B	69
Petunidin	0.00				3		0.00	0.00	B	69
Flavan-3-ols	(-)-Epicatechin			0.00	3		0.00	0.00	B	69
	(-)-Epigallocatechin			0.00	3		0.00	0.00	B	69
	(-)-Epigallocatechin 3-gallate			0.00	3		0.00	0.00	B	69
	(+)-Catechin			0.00	3		0.00	0.00	B	69
	(+)-Gallocatechin			0.00	3		0.00	0.00	B	69
Flavanones	Hesperetin			21.87	6	6.52	7.76	30.69	B	48, 69
	Naringenin			7.10	6	2.22	2.25	11.40	B	48, 69
Flavones	Apigenin			0.00	6	0.00	0.00	0.01	B	48, 69
	Luteolin			0.70	6	0.18	0.00	1.40	B	48, 69
Flavonols	Kaempferol			0.01	3		0.01	0.01	C	48
	Myricetin			0.01	6	0.00	0.00	0.03	B	48, 69

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
99115	Oregano, fresh ( <i>Origanum vulgare</i> )	Flavanones	Quercetin	0.20	6	0.05	0.00	0.40	B	48, 69
			Hesperetin	0.00	2		0.00	0.00	C	80
		Flavones	Apigenin	2.57	3	0.72	1.70	4.00	C	80, 162
			Luteolin	1.00	3	1.00	0.00	3.00	C	80, 162
		Flavonols	Isorhamnetin	0.00	2		0.00	0.00	C	80
			Kaempferol	0.00	3		0.00	0.00	C	80, 162
			Myricetin	2.10	1		2.10	2.10	D	162
			Quercetin	7.30	3	7.30	0.00	21.90	C	80, 162
99380	Oregano, Mexican, raw ( <i>Lippia graveolens</i> )	Flavanones	Naringenin	0.00	1		0.00	0.00	D	199
		Flavones	Apigenin	0.00	1		0.00	0.00	D	199
			Luteolin	25.10	1		25.10	25.10	D	199
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	199
			Quercetin	0.00	1		0.00	0.00	D	199
09226	Papayas, raw ( <i>Carica papaya</i> )	Flavones	Apigenin	0.01	4		0.01	0.01	C	48
		Flavones	Luteolin	0.02	4		0.02	0.02	C	48
			Kaempferol	0.01	4		0.01	0.01	C	48
			Myricetin	0.03	4		0.03	0.03	C	48
			Quercetin	0.00	4		0.00	0.00	C	48
11297	Parsley, raw ( <i>Petroselinum crispum</i> )	Flavanones	Hesperetin	0.00	2		0.00	0.00	C	80
		Flavones	Apigenin	225.93	11	42.12	0.00	630.00	B	80, 81, 103, 151
			Luteolin	1.24	5	0.69	0.00	4.00	C	80, 81, 103
		Flavonols	Isorhamnetin	0.00	2		0.00	0.00	C	80
			Kaempferol	1.49	11	0.33	0.00	2.50	B	80, 81, 103, 151
			Myricetin	8.08	1		8.08	8.08	D	103
	Quercetin	0.33	3	0.33	0.00	1.00	C	80, 103		
11298	Parsnips, raw ( <i>Pastinaca sativa</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	103
			Luteolin	0.00	1		0.00	0.00	D	103
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	103
			Myricetin	0.00	1		0.00	0.00	D	103
			Quercetin	0.99	1		0.99	0.99	D	103
09370	Peaches, canned, heavy syrup, drained	Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	1.87	1		1.87	1.87	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09236	Peaches, raw ( <i>Prunus persica</i> )	Anthocyanidins	Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.00	4		0.00	0.00	B	74
			Cyanidin	1.61	45	0.04	0.00	4.30	B	68, 172, 190
			Delphinidin	0.00	7		0.00	0.00	B	68
			Malvidin	0.00	7		0.00	0.00	A	68
			Pelargonidin	0.00	7		0.00	0.00	A	68
			Peonidin	0.00	7		0.00	0.00	A	68
		Petunidin	0.00	7		0.00	0.00	A	68	
		Flavan-3-ols	(-)-Epicatechin	2.34	49	0.21	0.00	6.92	B	8, 36, 68, 172, 177
			(-)-Epicatechin 3-gallate	0.00	14	0.00	0.00	0.01	A	8, 36, 68
			(-)-Epigallocatechin	1.04	14	0.32	0.00	3.34	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.30	14	0.16	0.00	2.01	A	8, 36, 68
			(+)-Catechin	4.92	49	0.51	0.53	10.12	B	8, 36, 68, 172, 177
			(+)-Gallocatechin	0.00	14		0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	9		0.00	0.00	B	68, 74, 102
			Luteolin	0.00	6		0.00	0.00	B	68, 74, 102
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	74, 102
			Myricetin	0.00	9		0.00	0.00	B	68, 74, 102
Quercetin	0.68		39	0.08	0.00	1.23	B	68, 74, 102, 172		
97054	Peaches, white, whole, raw ( <i>Prunus persica</i> )	Anthocyanidins	Cyanidin	0.97	30	0.14	0.42	1.81	B	172
		Flavan-3-ols	(-)-Epicatechin	4.09	30	0.61	2.26	6.19	B	172
			(+)-Catechin	12.25	30	1.74	4.62	20.82	B	172
		Flavonols	Quercetin	0.45	30	0.07	0.10	0.71	B	172
16089	Peanuts, all types, oil-roasted, with salt	Anthocyanidins	Cyanidin	0.00	1		0.00	0.00	B	68
			Delphinidin	0.00	1		0.00	0.00	B	68
			Malvidin	0.00	1		0.00	0.00	B	68
			Pelargonidin	0.00	1		0.00	0.00	B	68
			Peonidin	0.00	1		0.00	0.00	B	68
			Petunidin	0.00	1		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	1		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(-)-Epigallocatechin	0.66	1		0.66	0.66	B	68
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	B	68
			(+)-Catechin	0.00	1		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	1		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	1		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Naringenin	0.00	1		0.00	0.00	B	68
		Flavones	Apigenin	0.00	1		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	1		0.00	0.00	B	68
			Quercetin	0.00	1		0.00	0.00	B	68
99029	Pears without skin, raw ( <i>Pyrus communis</i> )	Flavan-3-ols	(-)-Epicatechin	1.74	12	0.43	0.82	2.96	B	8
			(-)-Epicatechin 3-gallate	0.00	12		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	12		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	12		0.00	0.00	B	8
			(+)-Catechin	0.14	12	0.03	0.01	0.36	B	8
			(+)-Gallocatechin	0.00	12		0.00	0.00	B	8
09376	Pears, canned, juice pack, drained	Flavan-3-ols	(-)-Epicatechin	0.26	1		0.26	0.26	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8
			(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.18	1		0.18	0.18	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
09252	Pears, raw ( <i>Pyrus communis</i> )	Anthocyanidins	Cyanidin	12.18	8	2.46	0.00	20.60	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	3.76	50	0.32	0.10	17.74	B	2, 8, 36, 68, 156, 177
			(-)-Epicatechin 3-gallate	0.02	28	0.02	0.00	0.50	A	8, 36, 68
			(-)-Epigallocatechin	0.59	28	0.25	0.00	5.07	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.17	28	0.12	0.00	2.52	A	8, 36, 68
			(+)-Catechin	0.27	47	0.04	0.00	2.32	B	2, 8, 36, 68, 177
			(+)-Gallocatechin	0.00	28		0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	6		0.00	0.00	A	68
			Naringenin	0.00	6		0.00	0.00	A	68
		Flavones	Apigenin	0.00	12		0.00	0.00	A	68, 74, 102
			Luteolin	0.00	8		0.00	0.00	B	68, 74, 102
Flavonols	Isorhamnetin	0.30	3	0.16	0.06	0.60	D	156		
	Kaempferol	0.00	4		0.00	0.00	B	74, 102		
	Myricetin	0.00	12		0.00	0.00	A	68, 74, 102		
	Quercetin	4.51	15	1.76	0.00	20.50	B	68, 74, 102, 156		
99080	Pears, without skin, cooked	Flavan-3-ols	(-)-Epicatechin	2.12	4		2.12	2.12	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.33	4		0.33	0.33	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
11300	Peas, edible-podded, raw ( <i>Pisum sativum</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
11308	Peas, green, canned, regular pack, drained solids	Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	0.00	4		0.00	0.00	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
		Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.11	4		0.11	0.11	B	74
11313	Peas, green, frozen, cooked, boiled, drained, without salt	Anthocyanidins	Cyanidin	0.03	2		0.03	0.03	C	48
			Delphinidin	0.03	2		0.03	0.03	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
			Apigenin	0.01	2		0.01	0.01	C	48
		Flavones	Luteolin	0.40	2		0.40	0.40	C	48
		Flavonols	Kaempferol	0.07	6	0.02	0.00	0.20	C	45, 48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.12	6	0.01	0.09	0.16	C	45, 48
11312	Peas, green, frozen, unprepared	Flavonols	Kaempferol	0.00	1		0.00	0.00	C	45
			Quercetin	0.15	1		0.15	0.15	C	45
11304	Peas, green, raw ( <i>Pisum sativum</i> )	Flavan-3-ols	(-)-Epicatechin	0.01	3		0.01	0.01	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.01	3		0.01	0.01	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavones	Apigenin	0.00	1		0.00	0.00	C	74
			Luteolin	0.00	1		0.00	0.00	C	74
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	74

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Myricetin	0.00	1		0.00	0.00	C	74
			Quercetin	14.27	4	6.14	0.00	19.03	B	74, 151
02064	Peppermint, fresh ( <i>Mentha x piperita</i> <i>nothosp. piperita</i> )	Flavanones	Eriodictyol	30.92	14	3.71	12.27	54.53	C	7
			Hesperetin	9.52	16	1.47	0.00	21.94	C	7, 80
		Flavones	Apigenin	8.71	16	6.11	0.24	99.00	C	7, 80
			Luteolin	11.33	16	2.14	4.31	42.00	C	7, 80
		Flavonols	Isorhamnetin	0.00	2		0.00	0.00	C	80
			Kaempferol	0.00	2		0.00	0.00	C	80
			Quercetin	0.00	2		0.00	0.00	C	80
99041	Peppers, ancho ( <i>Capsicum annuum</i> )	Flavones	Luteolin	3.36	1		3.36	3.36	D	97
			Quercetin	27.60	1		27.60	27.60	D	97
99088	Peppers, Californian (purchased in Hungary) ( <i>Capsicum annuum</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	103
			Luteolin	1.13	1		1.13	1.13	D	103
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	103
			Myricetin	0.00	1		0.00	0.00	D	103
			Quercetin	0.51	1		0.51	0.51	D	103
99384	Peppers, cascabella, raw ( <i>Capsicum annuum</i> )	Flavones	Luteolin	0.60	1		0.60	0.60	C	76
			Quercetin	2.40	1		2.40	2.40	C	76
99369	Peppers, cayenne, raw ( <i>Capsicum annuum</i> )	Flavones	Luteolin	1.73	1		1.73	1.73	C	76
			Quercetin	2.48	1		2.48	2.48	C	76
99370	Peppers, habanero, raw ( <i>Capsicum chinense</i> )	Flavones	Luteolin	0.07	2	0.02	0.04	0.09	C	76
		Flavonols	Quercetin	0.30	2	0.16	0.14	0.46	C	76
11670	Peppers, hot chili, green, raw ( <i>Capsicum</i> <i>frutescens</i> )	Flavones	Apigenin	1.40	1		1.40	1.40	C	10
			Luteolin	3.87	3	1.24	1.40	5.15	C	10, 97
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	10
			Myricetin	1.20	1		1.20	1.20	C	10
			Quercetin	14.70	3	3.22	10.50	21.02	C	10, 97
99042	Peppers, hot, yellow wax, raw ( <i>Capsicum</i> <i>annuum</i> )	Flavones	Luteolin	6.93	3	1.93	3.68	10.35	D	97
		Flavonols	Quercetin	50.63	3	14.61	28.83	78.38	D	97
11979	Peppers, jalapeno, raw ( <i>Capsicum annuum</i> )	Flavones	Luteolin	1.34	5	0.64	0.00	3.75	C	97
		Flavonols	Quercetin	5.07	5	2.64	0.00	15.12	C	97
99372	Peppers, long yellow, raw ( <i>Capsicum anuum</i> )	Flavones	Luteolin	1.68	1		1.68	1.68	C	76
		Flavonols	Quercetin	6.45	1		6.45	6.45	C	76
99356	Peppers, pimento ( <i>Capsicum annuum</i> )	Flavones	Luteolin	10.36	6	3.75	8.58	12.13	C	151
11977	Peppers, serrano, raw ( <i>Capsicum annuum</i> )	Flavones	Luteolin	4.14	1		4.14	4.14	D	97
		Flavonols	Quercetin	15.98	1		15.98	15.98	D	97
11333	Peppers, sweet, green,	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	raw ( <i>Capsicum annuum</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.00	3		0.00	0.00	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavones	Apigenin	0.00	4		0.00	0.00	C	6, 103, 152
			Luteolin	4.98	12	0.87	0.50	12.87	B	6, 81, 103, 151, 152
		Flavonols	Kaempferol	0.00	4		0.00	0.00	C	6, 103, 152
			Myricetin	0.00	2		0.00	0.00	C	103, 152
			Quercetin	2.40	15	0.40	0.50	4.23	B	6, 81, 103, 151, 152
11821	Peppers, sweet, red, raw ( <i>Capsicum annuum</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6
		Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	B	8, 36
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin	0.00	7		0.00	0.00	B	8, 36
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	B	8, 36
			(+)-Catechin	0.00	7		0.00	0.00	B	8, 36
			(+)-Gallocatechin	0.00	7		0.00	0.00	B	8, 36
		Flavones	Apigenin	0.00	6		0.00	0.00	B	6, 74
			Luteolin	0.61	10	0.14	0.10	1.10	B	6, 74, 81
		Flavonols	Kaempferol	0.00	6		0.00	0.00	B	6, 74
			Myricetin	0.00	4		0.00	0.00	B	74
Quercetin	0.25		6	0.20	0.00	1.20	B	6, 74		
11951	Peppers, sweet, yellow, raw ( <i>Capsicum annuum</i> )	Anthocyanidins	Cyanidin	0.00	2		0.00	0.00	C	6
		Flavones	Apigenin	0.00	2		0.00	0.00	C	6
			Luteolin	1.02	3	0.06	0.90	1.10	C	6, 76
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	6
			Quercetin	1.35	3	0.35	0.80	2.00	C	6, 76
99371	Peppers, tabasco, raw ( <i>Capsicum frutescens</i> )	Flavones	Luteolin	3.57	1		3.57	3.57	C	76
		Flavonols	Quercetin	0.09	1		0.09	0.09	C	76
99105	Perilla leaves, raw ( <i>Perilla frutescens</i> )	Flavones	Apigenin	0.07	1		0.07	0.07	D	30
			Luteolin	0.32	1		0.32	0.32	D	30
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	30
			Myricetin	0.43	1		0.43	0.43	D	30
			Quercetin	0.53	1		0.53	0.53	D	30
97088	Persimmons, raw ( <i>Diospyros</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
09266	Pineapple, raw, all varieties ( <i>Ananus comosus</i> )	Anthocyanidins	(+)-Catechin	0.63	3		0.63	0.63	C	36
			(+)-Gallocatechin	0.17	3		0.17	0.17	C	36
		Anthocyanidins	Cyanidin	0.00	1		0.00	0.00	B	68
			Delphinidin	0.00	1		0.00	0.00	B	68
			Malvidin	0.00	1		0.00	0.00	B	68
			Pelargonidin	0.00	1		0.00	0.00	B	68
			Peonidin	0.00	1		0.00	0.00	B	68
			Petunidin	0.00	1		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	8		0.00	0.00	B	8, 36, 68
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	B	8, 36, 68
			(-)-Epigallocatechin	0.00	8		0.00	0.00	B	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.00	8		0.00	0.00	B	8, 36, 68
			(+)-Catechin	0.00	8		0.00	0.00	B	8, 36, 68
			(+)-Gallocatechin	0.00	8		0.00	0.00	B	8, 36, 68
		Flavanones	Hesperetin	0.00	1		0.00	0.00	B	68
			Naringenin	0.00	1		0.00	0.00	B	68
		Flavones	Apigenin	0.00	2	0.00	0.00	0.01	B	48, 68
			Luteolin	0.01	2	0.01	0.00	0.02	B	48, 68
		Flavonols	Kaempferol	0.01	1		0.01	0.01	C	48
			Myricetin	0.01	2	0.02	0.00	0.03	B	48, 68
Quercetin	0.00		2		0.00	0.00	B	48, 68		
09430	Pineapple, raw, extra sweet variety ( <i>Ananus comosus</i> )	Anthocyanidins	Cyanidin	0.00	3		0.00	0.00	B	68
			Delphinidin	0.00	3		0.00	0.00	B	68
			Malvidin	0.00	3		0.00	0.00	B	68
			Pelargonidin	0.00	3		0.00	0.00	B	68
			Peonidin	0.00	3		0.00	0.00	B	68
			Petunidin	0.00	3		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68
			(+)-Catechin	0.00	5		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68
			Naringenin	0.00	5		0.00	0.00	B	68
		Flavones	Apigenin	0.00	3		0.00	0.00	B	68
			Luteolin	0.00	2		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	3		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
97043	Plum, red, whole, raw ( <i>Prunus spp.</i> )	Anthocyanidins	Quercetin	0.00	3		0.00	0.00	B	68
			Cyanidin	4.73	30	0.61	0.62	13.93	B	31, 48, 172
			Delphinidin	0.02	2		0.02	0.02	C	48
			Pelargonidin	0.02	2		0.02	0.02	C	48
			Peonidin	2.21	4		2.21	2.21	C	31
		Flavones	Apigenin	0.01	3	0.00	0.00	0.01	C	48, 102
			Luteolin	0.01	3	0.00	0.00	0.02	C	48, 102
		Flavonols	Kaempferol	0.01	3	0.00	0.00	0.01	C	48, 102
			Myricetin	0.02	3	0.01	0.00	0.03	C	48, 102
Quercetin	1.85		31	0.21	0.00	7.04	B	31, 48, 102, 172		
97046	Plum, yellow, whole, raw ( <i>Prunus spp.</i> )	Anthocyanidins	Cyanidin	0.00	14		0.00	0.00	B	31, 172
			Peonidin	0.00	8		0.00	0.00	C	31
		Flavonols	Kaempferol	0.10	12	0.02	0.06	0.17	B	100
			Myricetin	0.10	12	0.02	0.07	0.11	B	100
			Quercetin	2.21	26	0.34	0.50	4.28	B	31, 100, 172
97077	Plums, black diamond, with peel, raw ( <i>Prunus spp.</i> )	Anthocyanidins	Cyanidin	39.68	6	13.24	6.40	84.35	B	48, 68, 190
			Delphinidin	0.01	4	0.00	0.00	0.02	B	48, 68
			Malvidin	0.00	2		0.00	0.00	B	68
			Pelargonidin	0.01	4	0.00	0.00	0.02	B	48, 68
			Peonidin	0.00	2		0.00	0.00	B	68
			Petunidin	0.00	2		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	2.44	2	2.44	0.00	4.88	B	68
			(-)-Epicatechin 3-gallate	0.00	2		0.00	0.00	B	68
			(-)-Epigallocatechin	13.06	2	7.34	5.72	20.40	B	68
			(-)-Epigallocatechin 3-gallate	0.48	2	0.48	0.00	0.97	B	68
			(+)-Catechin	17.55	2	11.45	6.10	29.00	B	68
			(+)-Gallocatechin	0.00	2		0.00	0.00	B	68
			Flavanones	Hesperetin	0.00	2		0.00	0.00	B
		Naringenin		0.00	2		0.00	0.00	B	68
		Flavones	Apigenin	0.00	4	0.00	0.00	0.01	B	48, 68
			Luteolin	0.60	3	0.21	0.00	0.90	B	48, 68
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.01	4	0.00	0.00	0.03	B	48, 68
			Quercetin	12.45	4	6.18	1.80	25.10	B	48, 68
		09291	Plums, dried (prunes), uncooked	Anthocyanidins	Cyanidin	0.71	9	0.27	0.00	2.40
Delphinidin	0.04				9	0.02	0.00	0.20	B	48, 68
Malvidin	0.00				7		0.00	0.00	A	68
Pelargonidin	0.00				9	0.00	0.00	0.02	B	48, 68
Peonidin	0.00				7		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavan-3-ols	Petunidin	0.00	7		0.00	0.00	A	68
			(-)-Epicatechin	0.00	3		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	3		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(+)-Catechin	0.00	3		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	3		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	3		0.00	0.00	B	68
			Naringenin	0.00	3		0.00	0.00	B	68
		Flavones	Apigenin	0.00	9	0.00	0.00	0.01	B	48, 68
			Luteolin	0.01	6	0.00	0.00	0.02	B	48, 68
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.01	9	0.00	0.00	0.03	B	48, 68
Quercetin	1.80		9	0.60	0.00	4.00	B	48, 68		
99395	Plums, Greengage, raw ( <i>Prunus spp.</i> )	Flavones	Apigenin	0.00	2		0.00	0.00	C	102
			Luteolin	0.00	2		0.00	0.00	C	102
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	102
			Myricetin	0.00	2		0.00	0.00	C	102
			Quercetin	0.00	2		0.00	0.00	C	102
99367	Plums, purple, raw ( <i>Prunus spp.</i> )	Anthocyanidins	Cyanidin	17.93	32	2.68	6.73	35.51	C	31
			Peonidin	5.21	32	0.77	1.56	11.52	C	31
		Flavonols	Quercetin	2.19	32	0.33	0.69	4.18	C	31
09279	Plums, raw ( <i>Prunus spp.</i> )	Anthocyanidins	Cyanidin	12.02	16	2.04	6.11	40.43	B	68, 190
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	3.20	20	0.49	0.00	10.38	A	8, 36, 68, 177
			(-)-Epicatechin 3-gallate	0.76	15	0.43	0.00	4.98	A	8, 36, 68
			(-)-Epigallocatechin	0.24	15	0.10	0.00	1.19	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.40	14	0.21	0.00	2.47	A	8, 36, 68
			(+)-Catechin	2.89	20	0.44	0.00	5.82	A	8, 36, 68, 177
			(+)-Gallocatechin	0.09	15	0.09	0.00	1.35	A	8, 36, 68
		Flavanones	Hesperetin	0.00	8		0.00	0.00	A	68
			Naringenin	0.00	8		0.00	0.00	A	68
		Flavones	Apigenin	0.00	10		0.00	0.00	A	68, 74, 102
			Luteolin	0.00	6		0.00	0.00	B	68, 74, 102
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	74, 102

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
09286	Pomegranates, raw ( <i>Punica granatum</i> )		Myricetin	0.00	10		0.00	0.00	A	68, 74, 102		
			Quercetin	3.45	11	0.68	0.70	7.35	A	68, 74, 81, 102		
		Flavan-3-ols	(-)-Epicatechin	0.08	3		0.08	0.08	C	36		
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36		
			(-)-Epigallocatechin	0.16	3		0.16	0.16	C	36		
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36		
			(+)-Catechin	0.40	3		0.40	0.40	C	36		
			(+)-Gallocatechin	0.17	3		0.17	0.17	C	36		
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102		
			Luteolin	0.00	1		0.00	0.00	C	102		
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102		
			Myricetin	0.00	1		0.00	0.00	C	102		
			Quercetin	0.00	1		0.00	0.00	C	102		
		11352	Potato, flesh and skin, raw ( <i>Solanum tuberosum</i> )	Anthocyanidins	Cyanidin	0.00	18		0.00	0.00	A	68
Delphinidin	0.00				18		0.00	0.00	A	68		
Malvidin	0.00				18		0.00	0.00	A	68		
Pelargonidin	0.00				18		0.00	0.00	A	68		
Peonidin	0.00				18		0.00	0.00	A	68		
Petunidin	0.00				18		0.00	0.00	A	68		
Flavan-3-ols	(-)-Epicatechin			0.00	22		0.00	0.00	A	8, 68		
	(-)-Epicatechin 3-gallate			0.00	22		0.00	0.00	A	8, 68		
	(-)-Epigallocatechin			0.00	22		0.00	0.00	A	8, 68		
	(-)-Epigallocatechin 3-gallate			0.00	22		0.00	0.00	A	8, 68		
	(+)-Catechin			0.00	22		0.00	0.00	A	8, 68		
	(+)-Gallocatechin			0.00	22		0.00	0.00	A	8, 68		
Flavanones	Naringenin			0.00	18		0.00	0.00	A	68		
Flavones	Apigenin			0.00	19		0.00	0.00	B	30, 68		
	Luteolin			0.00	11		0.00	0.00	B	30, 68		
Flavonols	Kaempferol			0.03	2	0.03	0.00	0.05	C	30, 137		
	Myricetin			0.00	19		0.00	0.00	B	30, 68		
	Quercetin			0.84	20	0.23	0.00	3.41	B	30, 68, 137		
11358	Potatoes, red, flesh and skin, baked			Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68
					Delphinidin	0.00	8		0.00	0.00	A	68
					Malvidin	0.00	8		0.00	0.00	A	68
					Pelargonidin	0.00	8		0.00	0.00	A	68
					Peonidin	0.00	8		0.00	0.00	A	68
		Petunidin	0.00		8		0.00	0.00	A	68		
		Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	A	68		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(+)-Catechin	0.00	7		0.00	0.00	A	68
			(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
		Flavanones	Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68
			Quercetin	1.43	8	0.22	0.00	1.90	A	68
11355	Potatoes, red, flesh and skin, raw ( <i>Solanum tuberosum</i> )	Anthocyanidins	Cyanidin	0.00	6		0.00	0.00	B	68
			Delphinidin	0.00	6		0.00	0.00	B	68
			Malvidin	0.00	6		0.00	0.00	B	68
			Pelargonidin	0.00	6		0.00	0.00	B	68
			Peonidin	0.00	6		0.00	0.00	B	68
			Petunidin	0.00	6		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	4		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	68
			(+)-Catechin	0.00	4		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	4		0.00	0.00	B	68
			Naringenin	0.00	4		0.00	0.00	B	68
		Flavones	Apigenin	0.00	6		0.00	0.00	B	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	6		0.00	0.00	B	68
			Quercetin	0.65	6	0.21	0.00	1.13	B	68
		11356	Potatoes, Russet, flesh and skin, baked	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00
Delphinidin	0.00				8		0.00	0.00	A	68
Malvidin	0.00				8		0.00	0.00	A	68
Pelargonidin	0.00				8		0.00	0.00	A	68
Peonidin	0.00				8		0.00	0.00	A	68
Petunidin	0.00				8		0.00	0.00	A	68
Flavan-3-ols	(-)-Epicatechin			0.00	6		0.00	0.00	A	68
	(-)-Epicatechin 3-gallate			0.00	6		0.00	0.00	A	68
	(-)-Epigallocatechin			0.00	6		0.00	0.00	A	68
	(-)-Epigallocatechin 3-gallate			0.00	6		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
		Flavanones	(+)-Catechin	0.00	6		0.00	0.00	A	68		
			(+)-Gallocatechin	0.00	6		0.00	0.00	A	68		
			Hesperetin	0.00	6		0.00	0.00	A	68		
			Naringenin	0.00	6		0.00	0.00	A	68		
		Flavones	Apigenin	0.00	8		0.00	0.00	A	68		
			Luteolin	0.00	4		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	8		0.00	0.00	A	68		
Quercetin	0.73		8	0.22	0.00	1.60	A	68				
11353	Potatoes, russet, flesh and skin, raw ( <i>Solanum tuberosum</i> )	Anthocyanidins	Cyanidin	0.00	6		0.00	0.00	B	68		
			Delphinidin	0.00	6		0.00	0.00	B	68		
			Malvidin	0.00	6		0.00	0.00	B	68		
			Pelargonidin	0.00	6		0.00	0.00	B	68		
			Peonidin	0.00	6		0.00	0.00	B	68		
			Petunidin	0.00	6		0.00	0.00	B	68		
		Flavan-3-ols	(-)-Epicatechin	0.00	8		0.00	0.00	B	68		
			(-)-Epicatechin 3-gallate	0.00	8		0.00	0.00	B	68		
			(-)-Epigallocatechin	0.00	8		0.00	0.00	B	68		
			(-)-Epigallocatechin 3-gallate	0.00	8		0.00	0.00	B	68		
			(+)-Catechin	0.00	8		0.00	0.00	B	68		
			(+)-Gallocatechin	0.00	8		0.00	0.00	B	68		
		Flavanones	Hesperetin	0.00	8		0.00	0.00	B	68		
			Naringenin	0.00	8		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	6		0.00	0.00	B	68		
			Luteolin	0.00	2		0.00	0.00	B	68		
		Flavonols	Myricetin	0.00	6		0.00	0.00	B	68		
			Quercetin	1.65	6	0.62	0.00	3.41	B	68		
		11357	Potatoes, white, flesh and skin, baked	Anthocyanidins	Cyanidin	0.00	6		0.00	0.00	A	68
					Delphinidin	0.00	6		0.00	0.00	A	68
Malvidin	0.00				6		0.00	0.00	A	68		
Pelargonidin	0.00				6		0.00	0.00	A	68		
Peonidin	0.00				6		0.00	0.00	A	68		
Petunidin	0.00				6		0.00	0.00	A	68		
Flavan-3-ols	(-)-Epicatechin			0.00	6		0.00	0.00	A	68		
	(-)-Epicatechin 3-gallate			0.00	6		0.00	0.00	A	68		
	(-)-Epigallocatechin			0.00	6		0.00	0.00	A	68		
	(-)-Epigallocatechin 3-gallate			0.00	6		0.00	0.00	A	68		
	(+)-Catechin			0.00	6		0.00	0.00	A	68		
	(+)-Gallocatechin			0.00	6		0.00	0.00	A	68		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavanones	Hesperetin	0.00	6		0.00	0.00	A	68
			Naringenin	0.00	6		0.00	0.00	A	68
		Flavones	Apigenin	0.00	6		0.00	0.00	A	68
			Luteolin	0.00	3		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	6		0.00	0.00	A	68
			Quercetin	1.19	6	0.44	0.00	2.60	A	68
11354	Potatoes, white, flesh and skin, raw ( <i>Solanum tuberosum</i> )	Anthocyanidins	Cyanidin	0.00	6		0.00	0.00	B	68
			Delphinidin	0.00	6		0.00	0.00	B	68
			Malvidin	0.00	6		0.00	0.00	B	68
			Pelargonidin	0.00	6		0.00	0.00	B	68
			Peonidin	0.00	6		0.00	0.00	B	68
			Petunidin	0.00	6		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	6		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	6		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	6		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	6		0.00	0.00	B	68
			(+)-Catechin	0.00	6		0.00	0.00	B	68
			(+)-Gallocatechin	0.00	6		0.00	0.00	B	68
		Flavanones	Hesperetin	0.00	6		0.00	0.00	B	68
			Naringenin	0.00	6		0.00	0.00	B	68
		Flavones	Apigenin	0.00	6		0.00	0.00	B	68
			Luteolin	0.00	4		0.00	0.00	B	68
		Flavonols	Myricetin	0.00	6		0.00	0.00	B	68
			Quercetin	0.49	6	0.19	0.00	1.04	B	68
09287	Prickly pears, raw ( <i>Opuntia spp.</i> )	Flavonols	Isorhamnetin	0.65	4	0.59	0.00	2.41	C	90
			Kaempferol	0.18	4	0.08	0.00	0.38	C	90
			Quercetin	4.86	4	1.66	0.98	9.05	C	90
99311	Pummelo juice, raw	Flavanones	Eriodictyol	2.86	12	1.90	0.00	23.33	C	14, 118
			Hesperetin	1.79	12	0.86	0.00	9.36	C	14, 118
			Naringenin	25.31	13	9.51	1.94	132.86	C	14, 118, 197
		Flavones	Apigenin	0.65	12	0.31	0.00	2.80	C	14, 118
			Luteolin	0.00	1		0.00	0.00	C	118
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	118
Quercetin	0.00		12		0.00	0.00	C	14, 118		
09295	Pummelo, raw ( <i>Citrus grandis</i> )	Flavanones	Hesperetin	8.40	2		8.40	8.40	C	48
			Naringenin	24.72	2		24.72	24.72	C	48
11422	Pumpkin, raw ( <i>Cucurbita spp.</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	1.63	1		1.63	1.63	C	102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
11427	Purslane, raw ( <i>Portulaca oleracea</i> )	Flavones	Myricetin	0.00	1		0.00	0.00	C	102
			Quercetin	0.00	1		0.00	0.00	C	102
			Apigenin	0.00	2		0.00	0.00	C	74
		Flavonols	Luteolin	0.00	2		0.00	0.00	C	74
			Kaempferol	0.00	2		0.00	0.00	C	74
			Myricetin	0.00	2		0.00	0.00	C	74
99032	Queen Anne's Lace, leaves, raw ( <i>Daucus carota subsp. Carota</i> )	Flavones	Apigenin	12.60	1		12.60	12.60	B	175
			Luteolin	34.10	1		34.10	34.10	B	175
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	B	175
			Kaempferol	0.20	1		0.20	0.20	B	175
			Myricetin	0.40	1		0.40	0.40	B	175
			Quercetin	1.10	1		1.10	1.10	B	175
09296	Quinces, raw ( <i>Cydonia oblonga</i> )	Flavan-3-ols	(-)-Epicatechin	0.67	3		0.67	0.67	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.75	3		0.75	0.75	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	0.00	1		0.00	0.00	C	102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Myricetin	0.00	1		0.00	0.00	C	102
			Quercetin	0.00	1		0.00	0.00	C	102
99386	Radish leaves, raw ( <i>Raphanus sativus</i> )	Flavonols	Kaempferol	7.72	3		7.72	7.72	C	151
			Quercetin	70.37	3		70.37	70.37	C	151
11676	Radish seeds, sprouted, raw ( <i>Raphanus sativus</i> )	Flavonols	Kaempferol	21.85	9	6.00	13.76	35.18	B	151
11429	Radishes, raw ( <i>Raphanus sativus</i> )	Anthocyanidins	Cyanidin	0.00	7		0.00	0.00	A	68
			Delphinidin	0.00	7		0.00	0.00	A	68
			Malvidin	0.00	7		0.00	0.00	A	68
			Pelargonidin	25.66	15	1.95	7.40	34.80	B	68, 190
			Peonidin	0.00	7		0.00	0.00	A	68
			Petunidin	0.00	7		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(-)-Epigallocatechin	0.00	3		0.00	0.00	B	68
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	B	68
			(+)-Catechin	0.00	3		0.00	0.00	B	68



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
		Flavanones	(+)-Gallocatechin	0.00	3		0.00	0.00	B	68		
			Hesperetin	0.00	3		0.00	0.00	B	68		
			Naringenin	0.00	3		0.00	0.00	B	68		
		Flavones	Apigenin	0.00	13		0.00	0.00	A	68, 74, 103		
			Luteolin	0.00	9		0.00	0.00	B	68, 74, 103		
		Flavonols	Kaempferol	0.86	7	0.15	0.40	2.11	B	18, 74, 103		
			Myricetin	0.00	13		0.00	0.00	A	68, 74, 103		
			Quercetin	0.00	14		0.00	0.00	B	18, 68, 74, 103		
		09298	Raisins, seedless ( <i>Vitis vinifera</i> )	Anthocyanidins	Cyanidin	0.03	7	0.01	0.00	0.10	B	48, 68
Delphinidin	0.01				7	0.00	0.00	0.02	B	48, 68		
Malvidin	0.00				5		0.00	0.00	B	68		
Pelargonidin	0.01				7	0.00	0.00	0.02	B	48, 68		
Peonidin	0.00				5		0.00	0.00	B	68		
Petunidin	0.00				5		0.00	0.00	B	68		
Flavan-3-ols	(-)-Epicatechin			0.10	7	0.10	0.00	0.71	B	8, 68		
	(-)-Epicatechin 3-gallate			0.00	7		0.00	0.00	B	8, 68		
	(-)-Epigallocatechin			0.00	7		0.00	0.00	B	8, 68		
	(-)-Epigallocatechin 3-gallate			0.00	7		0.00	0.00	B	8, 68		
	(+)-Catechin			0.42	7	0.42	0.00	2.97	B	8, 68		
	(+)-Gallocatechin			0.00	7		0.00	0.00	B	8, 68		
Flavanones	Hesperetin			0.00	6		0.00	0.00	B	68		
	Naringenin			0.00	6		0.00	0.00	A	68		
Flavones	Apigenin			0.00	7	0.00	0.00	0.01	B	48, 68		
	Luteolin			0.01	4	0.00	0.00	0.02	B	48, 68		
Flavonols	Kaempferol			0.01	2		0.01	0.01	C	48		
	Myricetin			0.01	7	0.00	0.00	0.03	B	48, 68		
	Quercetin			0.25	7	0.24	0.00	1.70	B	48, 68		
99411	Raspberries, black ( <i>Rubus spp.</i> )			Anthocyanidins	Cyanidin	323.47	1		323.47	323.47	C	190
					Peonidin	0.55	1		0.55	0.55	C	190
09302	Raspberries, raw ( <i>Rubus spp.</i> )	Anthocyanidins	Cyanidin	35.84	23	2.67	20.73	71.11	B	3, 68, 116, 190		
			Delphinidin	0.29	14	0.13	0.00	2.01	B	3, 68		
			Malvidin	0.70	14	0.17	0.00	2.75	B	3, 68		
			Pelargonidin	1.85	23	0.38	0.00	8.23	B	3, 68, 116, 190		
			Peonidin	0.00	6		0.00	0.00	A	68		
			Petunidin	0.00	6		0.00	0.00	A	68		
		Flavan-3-ols	(-)-Epicatechin	4.07	15	0.83	0.00	8.26	A	8, 36, 68, 177		
			(-)-Epicatechin 3-gallate	0.00	10		0.00	0.00	B	8, 36, 68		
			(-)-Epigallocatechin	0.46	10	0.02	0.00	1.11	B	8, 36, 68		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			(-)-Epigallocatechin 3-gallate	0.54	10	0.54	0.00	5.35	B	8, 36, 68
			(+)-Catechin	1.56	15	0.48	0.00	7.33	A	8, 36, 68, 177
			(+)-Gallocatechin	0.00	10	0.00	0.00	0.01	B	8, 36, 68
		Flavanones	Hesperetin	0.00	3		0.00	0.00	B	68
			Naringenin	0.00	3		0.00	0.00	B	68
		Flavones	Apigenin	0.00	7		0.00	0.00	B	68, 102
			Luteolin	0.00	3		0.00	0.00	B	68, 102
		Flavonols	Kaempferol	0.09	9	0.07	0.00	0.66	B	67, 102, 116, 198
			Myricetin	0.00	9		0.00	0.00	B	67, 68
Quercetin	1.23		21	0.23	0.00	4.58	B	65, 67, 68, 81, 102, 116, 198		
99327	Raspberries, red, frozen	Anthocyanidins	Cyanidin	22.60	1		22.60	22.60	C	48
			Delphinidin	0.02	1		0.02	0.02	C	48
			Pelargonidin	1.60	1		1.60	1.60	C	48
		Flavones	Apigenin	0.01	1		0.01	0.01	C	48
			Luteolin	0.02	1		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	1		0.01	0.01	C	48
			Myricetin	0.03	1		0.03	0.03	C	48
			Quercetin	1.10	1		1.10	1.10	C	48
		99052	Rhubarb stalks, cooked	Flavan-3-ols	(-)-Epicatechin	0.38	4		0.38	0.38
(-)-Epicatechin 3-gallate	0.49				4		0.49	0.49	B	8
(-)-Epigallocatechin	0.00				4		0.00	0.00	B	8
(-)-Epigallocatechin 3-gallate	0.00				4		0.00	0.00	B	8
(+)-Catechin	1.48				4		1.48	1.48	B	8
(+)-Gallocatechin	0.00				4		0.00	0.00	B	8
(-)-Epicatechin	0.51				4		0.51	0.51	B	8
09307	Rhubarb, raw ( <i>Rheum rhabarbarum</i> )	Flavan-3-ols	(-)-Epicatechin 3-gallate	0.60	4		0.60	0.60	B	8
			(-)-Epigallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epigallocatechin 3-gallate	0.00	4		0.00	0.00	B	8
			(+)-Catechin	2.17	4		2.17	2.17	B	8
			(+)-Gallocatechin	0.00	4		0.00	0.00	B	8
			(-)-Epicatechin	0.00	1		0.00	0.00	C	8
			(-)-Epicatechin 3-gallate	0.00	1		0.00	0.00	C	8
(-)-Epigallocatechin	0.00	1		0.00	0.00	C	8			
20045	Rice, white, long-grain, regular, cooked	Flavan-3-ols	(-)-Epigallocatechin 3-gallate	0.00	1		0.00	0.00	C	8
			(+)-Catechin	0.00	1		0.00	0.00	C	8
			(+)-Gallocatechin	0.00	1		0.00	0.00	C	8
			Hesperetin	0.00	1		0.00	0.00	C	80
			Naringenin	24.86	1		24.86	24.86	D	199

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavones	Apigenin	0.55	2	0.55	0.00	1.10	C	80, 199
			Luteolin	2.00	2	2.00	0.00	4.00	C	80, 199
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	2		0.00	0.00	C	80, 199
			Quercetin	0.00	2		0.00	0.00	C	80, 199
99335	Rowanberries, raw ( <i>Sorbus</i> )	Flavonols	Kaempferol	0.00	2		0.00	0.00	C	67
Myricetin	0.00		2		0.00	0.00	C	67		
Quercetin	7.40		2	1.10	6.30	8.50	C	67		
11435	Rutabagas, raw ( <i>Brassica napus</i> ( <i>Napobrassica</i> Group))	Flavones	Apigenin	3.85	4	3.85	0.00	15.40	C	74, 103
			Luteolin	0.00	4		0.00	0.00	C	74, 103
		Flavonols	Kaempferol	0.57	4	0.57	0.00	2.27	C	74, 103
			Myricetin	2.13	4	2.14	0.00	8.54	C	74, 103
			Quercetin	0.08	4	0.08	0.00	0.32	C	74, 103
99116	Sage, fresh ( <i>Salvia</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
			Naringenin	0.00	1		0.00	0.00	D	199
		Flavones	Apigenin	1.20	2	1.20	0.00	2.40	C	80, 199
			Luteolin	16.70	2	16.70	0.00	33.40	C	80, 199
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	2		0.00	0.00	C	80, 199
			Quercetin	0.00	2		0.00	0.00	C	80, 199
06931	Sauce, pasta, spaghetti/marinara, ready-to-serve	Flavonols	Kaempferol	0.01	3		0.01	0.01	C	168
			Quercetin	0.91	3		0.91	0.91	C	168
11439	Sauerkraut, canned, solids and liquids	Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.00	4		0.00	0.00	B	74
06159	Soup, tomato, canned, condensed, commercial	Flavonols	Kaempferol	0.00	3		0.00	0.00	C	168
			Quercetin	0.14	3		0.14	0.14	C	168
99304	Sour orange, juice	Flavanones	Eriodictyol	14.54	3	2.54	9.77	18.44	C	14, 115
			Hesperetin	10.74	3	4.88	1.50	18.11	C	14, 115
			Naringenin	23.77	3	4.66	18.64	33.08	C	14, 115
		Flavones	Apigenin	0.00	2		0.00	0.00	D	14
		Flavonols	Quercetin	0.00	2		0.00	0.00	D	14
16108	Soybeans, mature seeds, raw ( <i>Glycine max</i> )	Flavan-3-ols	(-)-Epicatechin	37.41	3		37.41	37.41	C	151
02004	Spices, bay leaf ( <i>Laurus nobilis</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	D	162
			Luteolin	0.00	1		0.00	0.00	D	162

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Kaempferol	4.82	1		4.82	4.82	D	162
			Myricetin	0.00	1		0.00	0.00	D	162
			Quercetin	3.19	1		3.19	3.19	D	162
02023	Spices, marjoram, dried ( <i>Origanum majorana</i> )	Flavanones	Naringenin	0.00	1		0.00	0.00	D	199
		Flavones	Apigenin	3.50	1		3.50	3.50	D	199
			Luteolin	0.00	1		0.00	0.00	D	199
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	199
			Quercetin	0.00	1		0.00	0.00	D	199
02029	Spices, parsley, dried ( <i>Petroselinum crispum</i> )	Flavones	Apigenin	13506.22	1		13506.22	13506.22	B	110
			Luteolin	19.75	1		19.75	19.75	B	110
		Flavonols	Isorhamnetin	331.24	1		331.24	331.24	B	110
			Kaempferol	0.00	1		0.00	0.00	B	110
11463	Spinach, frozen, chopped or leaf, unprepared	Flavones	Apigenin	0.00	4		0.00	0.00	B	74
			Luteolin	0.00	4		0.00	0.00	B	74
		Flavonols	Kaempferol	0.00	4		0.00	0.00	B	74
			Myricetin	0.00	4		0.00	0.00	B	74
			Quercetin	0.00	4		0.00	0.00	B	74
11457	Spinach, raw ( <i>Spinacia oleracea</i> )	Flavones	Apigenin	0.00	9	0.00	0.00	0.01	B	30, 48, 74, 103
			Luteolin	0.74	9	0.74	0.00	6.64	B	30, 48, 74, 103
		Flavonols	Kaempferol	7.64	10	5.26	0.00	55.00	B	30, 48, 74, 103, 119
			Myricetin	0.01	9	0.00	0.00	0.04	B	30, 48, 74, 103
			Quercetin	4.11	10	2.82	0.00	27.22	B	30, 48, 74, 103, 119
11478	Squash, summer, zucchini, includes skin, cooked, boiled, drained, without salt	Flavonols	Quercetin	0.47	10	0.05	0.25	0.73	C	5
11477	Squash, summer, zucchini, includes skin, raw ( <i>Cucurbita spp.</i> )	Flavan-3-ols	(-)-Epicatechin	0.00	3		0.00	0.00	C	36
			(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin	0.00	3		0.00	0.00	C	36
			(-)-Epigallocatechin 3-gallate	0.00	3		0.00	0.00	C	36
			(+)-Catechin	0.00	3		0.00	0.00	C	36
			(+)-Gallocatechin	0.00	3		0.00	0.00	C	36
		Flavonols	Quercetin	0.66	5	0.13	0.40	1.12	C	5
99382	Star apple, raw ( <i>Chrosophyllum cainito</i> )	Flavan-3-ols	(-)-Epicatechin	0.73	1		0.73	0.73	D	104
			(-)-Epigallocatechin	0.14	1		0.14	0.14	D	104
			(+)-Catechin	0.25	1		0.25	0.25	D	104
			(+)-Gallocatechin	0.53	1		0.53	0.53	D	104
		Flavonols	Myricetin	0.08	1		0.08	0.08	D	104
			Quercetin	0.26	1		0.26	0.26	D	104

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data		
09318	Strawberries, frozen, unsweetened	Anthocyanidins	Cyanidin	1.27	9	0.39	0.33	3.21	B	48, 55, 87		
			Delphinidin	0.02	1		0.02	0.02	C	48		
			Pelargonidin	19.32	9	5.54	7.35	48.50	B	48, 55, 87		
		Flavones	Apigenin	0.01	1		0.01	0.01	C	48		
			Luteolin	0.02	1		0.02	0.02	C	48		
		Flavonols	Kaempferol	0.49	20	0.08	0.00	1.30	B	48, 65, 66, 87		
			Myricetin	0.35	4	0.14	0.03	0.69	C	48, 87		
			Quercetin	0.46	17	0.04	0.30	0.90	B	48, 65, 66		
		09316	Strawberries, raw ( <i>Fragaria X ananassa</i> )	Anthocyanidins	Cyanidin	1.96	71	0.14	0.00	5.42	B	48, 55, 68, 188, 189, 190
Delphinidin	0.32				8	0.32	0.00	2.60	B	48, 68		
Malvidin	0.00				7		0.00	0.00	A	68		
Pelargonidin	31.27				71	1.90	0.00	57.49	B	48, 55, 68, 188, 189, 190		
Peonidin	0.00				7		0.00	0.00	A	68		
Petunidin	0.08				8	0.08	0.00	0.63	B	68, 190		
Flavan-3-ols	(-)-Epicatechin			0.12	22	0.02	0.00	0.42	B	8, 22, 36, 68, 177		
	(-)-Epicatechin 3-gallate			0.15	13	0.03	0.00	0.66	A	8, 36, 68		
	(-)-Epigallocatechin			0.78	13	0.35	0.00	4.31	A	8, 36, 68		
	(-)-Epigallocatechin 3-gallate			0.11	13	0.07	0.00	0.73	A	8, 36, 68		
	(+)-Catechin			3.32	23	0.35	0.26	5.43	B	8, 22, 36, 68, 72, 177		
	(+)-Gallocatechin			0.03	12	0.01	0.00	0.12	A	8, 36, 68		
	Flavanones			Hesperetin	0.00	6		0.00	0.00	A	68	
Naringenin				0.26	7	0.26	0.00	1.81	B	68, 72		
Flavones	Apigenin			0.00	11	0.00	0.00	0.01	A	48, 68, 74, 102		
	Luteolin			0.00	7	0.00	0.00	0.02	B	48, 68, 74, 102		
Flavonols	Kaempferol			0.46	69	0.03	0.00	1.61	B	22, 48, 65, 67, 72, 74, 81, 102, 188, 189		
	Myricetin			0.00	12	0.00	0.00	0.03	A	48, 67, 68, 74		
	Quercetin			1.14	52	0.10	0.00	3.20	B	22, 48, 65, 67, 68, 72, 74, 81, 102, 188		
97007	Strawberry tree fruit ( <i>arbutus</i> ), raw ( <i>Arbutus unedo</i> )			Flavan-3-ols	(-)-Epicatechin	1.11	3		1.11	1.11	C	36
					(-)-Epicatechin 3-gallate	0.00	3		0.00	0.00	C	36
		(-)-Epigallocatechin	0.00		3		0.00	0.00	C	36		
		(-)-Epigallocatechin 3-gallate	0.00		3		0.00	0.00	C	36		
		(+)-Catechin	7.48		3		7.48	7.48	C	36		
		(+)-Gallocatechin	1.60		3		1.60	1.60	C	36		
11505	Sweet potato leaves, raw ( <i>Ipomoea batatas</i> )	Flavones	Apigenin	0.06	4	0.06	0.00	0.24	C	30, 48		
			Luteolin	0.11	4	0.10	0.00	0.41	C	30, 48		
		Flavonols	Kaempferol	0.25	4	0.00	0.00	0.50	C	30, 48		
			Myricetin	4.89	4	3.68	0.03	15.59	C	30, 48		

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NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Quercetin	11.57	4	5.71	2.60	26.69	C	30, 48
99385	Sweet potato, purple, cooked	Anthocyanidins	Cyanidin	10.60	1		10.60	10.60	C	48
			Delphinidin	0.90	1		0.90	0.90	C	48
			Pelargonidin	0.02	1		0.02	0.02	C	48
11507	Sweet potato, raw, unprepared ( <i>Ipomoea batatas</i> )	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Myricetin	0.03	2		0.03	0.03	C	48
			Quercetin	0.01	2		0.01	0.01	C	48
99305	Tangelo juice	Flavanones	Eriodictyol	1.20	1		1.20	1.20	D	14
			Hesperetin	74.89	1		74.89	74.89	D	14
			Naringenin	42.51	1		42.51	42.51	D	14
		Flavones	Apigenin	0.00	1		0.00	0.00	D	14
		Flavonols	Quercetin	0.00	1		0.00	0.00	D	14
09225	Tangerine juice, frozen concentrate, sweetened, diluted with 3 volume water	Flavanones	Hesperetin	22.01	13	2.94	5.94	47.08	C	121
			Naringenin	3.61	13	0.75	1.04	7.96	C	121
09221	Tangerine juice, raw	Flavanones	Eriodictyol	0.02	5	0.02	0.00	0.10	C	14, 118
			Hesperetin	9.56	5	1.72	4.31	13.37	C	14, 118
			Naringenin	1.20	6	1.20	0.00	7.22	C	14, 118, 197
		Flavones	Apigenin	0.00	5		0.00	0.00	C	14, 118
			Luteolin	0.00	1		0.00	0.00	C	118
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	118
			Quercetin	0.29	5	0.29	0.00	1.44	C	14, 118
09218	Tangerines, (mandarin oranges), raw ( <i>Citrus reticulata</i> )	Flavanones	Hesperetin	7.94	11	2.12	4.52	11.17	C	37, 48
			Naringenin	10.02	11	1.47	1.74	29.15	C	37, 48
		Flavones	Apigenin	0.00	1		0.00	0.00	C	102
			Luteolin	0.00	1		0.00	0.00	C	102
		Flavonols	Kaempferol	0.00	1		0.00	0.00	C	102
			Myricetin	0.00	1		0.00	0.00	C	102
			Quercetin	0.00	1		0.00	0.00	C	102
99306	Tangor juice (e.g., murcot or temple)	Flavanones	Eriodictyol	1.02	1		1.02	1.02	D	14
			Hesperetin	19.25	7	3.16	7.98	32.45	C	14, 121
			Naringenin	6.50	7	1.02	3.77	11.03	C	14, 121
		Flavones	Apigenin	0.00	1		0.00	0.00	D	14
		Flavonols	Quercetin	0.00	1		0.00	0.00	D	14
99316	Tangor juice, diluted from	Flavanones	Hesperetin	19.06	5	4.38	7.98	32.45	C	121

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	frozen concentrate (ex. murcot or temple)		Naringenin	7.04	5	1.33	3.95	11.03	C	121
11521	Taro leaves, cooked, steamed, without salt	Anthocyanidins	Cyanidin	0.02	1		0.02	0.02	C	48
			Delphinidin	0.02	1		0.02	0.02	C	48
			Pelargonidin	0.02	1		0.02	0.02	C	48
11520	Taro leaves, raw ( <i>Colocasia esculenta</i> )	Flavones	Apigenin	0.01	1		0.01	0.01	C	48
			Luteolin	0.02	1		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	1		0.01	0.01	C	48
			Myricetin	0.03	1		0.03	0.03	C	48
			Quercetin	0.01	1		0.01	0.01	C	48
11518	Taro, raw ( <i>Colocasia esculenta</i> )	Flavonols	Quercetin	2.87	3		2.87	2.87	C	151
99117	Tarragon, fresh ( <i>Artemisia dracunculus</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
99117	Tarragon, fresh ( <i>Artemisia dracunculus</i> )	Flavones	Apigenin	0.00	1		0.00	0.00	C	80
			Luteolin	1.00	1		1.00	1.00	C	80
		Flavonols	Isorhamnetin	5.00	1		5.00	5.00	C	80
			Kaempferol	11.00	1		11.00	11.00	C	80
			Quercetin	10.00	1		10.00	10.00	C	80
14355	Tea, black, brewed, prepared with tap water	Flavan-3-ols	(-)-Epicatechin	2.13	96	0.10	0.15	8.74	B	9, 23, 36, 40, 86, 89, 96, 110, 141, 180
			(-)-Epicatechin 3-gallate	5.87	96	0.17	0.80	18.98	B	9, 23, 36, 40, 86, 89, 96, 110, 141, 180
			(-)-Epigallocatechin	7.93	96	0.45	0.29	31.04	B	9, 23, 36, 40, 86, 89, 96, 110, 141, 180
			(-)-Epigallocatechin 3-gallate	9.26	96	0.46	0.68	40.66	B	9, 23, 36, 40, 86, 89, 96, 110, 141, 180
			(+)-Catechin	1.47	57	0.07	0.35	4.79	B	9, 36, 40, 89, 110
			(+)-Gallocatechin	1.20	11	0.18	0.56	2.78	A	9, 36
			Theaflavin	1.58	39	0.16	0.36	5.27	B	40, 167, 180
			Theaflavin-3,3'-digallate	1.75	39	0.21	0.06	4.96	B	40, 167, 180
			Theaflavin-3'-gallate	1.51	39	0.16	0.12	4.13	B	40, 167, 180
			Theaflavin-3-gallate	1.25	39	0.14	0.06	3.19	B	40, 167, 180
		Thearubigins	81.30	32	9.76	48.28	139.50	B	141, 180	
		Flavones	Apigenin	0.00	10		0.00	0.00	B	73
			Luteolin	0.00	10		0.00	0.00	B	73
		Flavonols	Kaempferol	1.31	64	0.08	0.25	2.41	B	73, 81, 110, 131, 141, 180, 186
Myricetin	0.45		32	0.01	0.17	0.90	A	73, 81, 110, 180, 186		

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Quercetin	1.99	64	0.05	0.41	4.75	B	73, 81, 110, 131, 141, 180, 186
14352	Tea, black, brewed, prepared with tap water, decaffeinated	Flavan-3-ols	(-)-Epicatechin	0.49	4	0.13	0.34	0.87	B	180
			(-)-Epicatechin 3-gallate	0.64	4	0.36	0.25	1.71	B	180
			(-)-Epigallocatechin	0.55	4	0.16	0.36	1.01	B	180
			(-)-Epigallocatechin 3-gallate	1.01	4	0.48	0.49	2.45	B	180
			Theaflavin	0.35	4	0.18	0.08	0.86	B	180
			Theaflavin-3,3'-digallate	0.43	4	0.37	0.00	1.52	B	180
			Theaflavin-3'-gallate	0.18	4	0.15	0.00	0.61	B	180
			Theaflavin-3-gallate	0.41	4	0.24	0.11	1.14	B	180
			Thearubigins	49.03	4	1.13	46.05	51.52	B	180
		Flavones	Apigenin	0.00	3		0.00	0.00	C	152
			Luteolin	0.00	3		0.00	0.00	C	152
		Flavonols	Kaempferol	0.88	7	0.20	0.39	1.84	B	152, 180
			Myricetin	0.89	7	0.30	0.26	2.10	B	152, 180
Quercetin	2.74		7	0.12	2.46	3.38	B	152, 180		
99342	Tea, black, ready-to-drink, diet, plain and flavored	Flavan-3-ols	(-)-Epicatechin	0.37	6	0.16	0.00	1.05	B	180
			(-)-Epicatechin 3-gallate	0.08	6	0.08	0.00	0.49	B	180
			(-)-Epigallocatechin	0.09	6	0.05	0.00	0.29	B	180
			(-)-Epigallocatechin 3-gallate	0.12	6	0.11	0.00	0.68	B	180
			Theaflavin	0.01	6	0.01	0.00	0.03	B	180
			Theaflavin-3,3'-digallate	0.00	6		0.00	0.00	B	180
			Theaflavin-3'-gallate	0.00	6		0.00	0.00	B	180
			Theaflavin-3-gallate	0.01	6	0.01	0.00	0.05	B	180
			Thearubigins	15.82	6	2.93	4.72	21.27	B	180
		Flavonols	Kaempferol	0.33	6	0.10	0.00	0.64	B	180
			Myricetin	0.12	6	0.04	0.00	0.20	B	180
			Quercetin	0.72	6	0.23	0.02	1.59	B	180
		99341	Tea, black, ready-to-drink, plain and flavored	Flavan-3-ols	(-)-Epicatechin	0.49	17	0.15	0.00	2.66
(-)-Epicatechin 3-gallate	0.21				17	0.06	0.00	0.67	B	180
(-)-Epigallocatechin	0.85				17	0.42	0.00	7.45	B	180
(-)-Epigallocatechin 3-gallate	0.51				17	0.19	0.00	3.11	B	180
Theaflavin	0.05				17	0.02	0.00	0.19	B	180
Theaflavin-3,3'-digallate	0.04				17	0.02	0.00	0.31	B	180
Theaflavin-3'-gallate	0.02				17	0.01	0.00	0.09	B	180
Theaflavin-3-gallate	0.06				17	0.02	0.00	0.27	B	180
Thearubigins	25.49				17	3.17	7.80	56.78	B	180
Flavonols	Kaempferol			0.66	17	0.08	0.14	1.23	B	180
	Myricetin			0.87	17	0.09	0.11	1.46	B	180



# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
99365	Tea, fruit, dry	Flavan-3-ols	Quercetin	0.74	17	0.15	0.20	2.10	B	180
			(-)-Epicatechin	230.00	6	16.33	200.00	300.00	C	85
			(-)-Epicatechin 3-gallate	273.33	6	20.44	220.00	360.00	C	85
			(-)-Epigallocatechin	106.67	6	5.58	90.00	130.00	C	85
			(-)-Epigallocatechin 3-gallate	415.00	6	41.53	330.00	610.00	C	85
			(+)-Catechin	0.00	6		0.00	0.00	C	85
99070	Tea, green, brewed	Flavan-3-ols	(-)-Epicatechin	8.29	67	0.49	1.90	26.00	B	23, 36, 86, 89, 96, 98, 110, 134, 160, 180
			(-)-Epicatechin 3-gallate	19.73	67	2.76	4.30	139.60	B	23, 36, 86, 89, 96, 98, 110, 134, 160, 180
			(-)-Epigallocatechin	16.71	67	1.41	1.00	54.40	B	23, 36, 86, 89, 96, 98, 110, 134, 160, 180
			(-)-Epigallocatechin 3-gallate	77.81	67	6.97	2.31	203.20	B	23, 36, 86, 89, 96, 98, 110, 134, 160, 180
			(+)-Catechin	2.55	39	1.53	0.00	44.40	B	36, 89, 98, 110, 160
			(+)-Gallocatechin	1.54	3		1.54	1.54	C	36
			Theaflavin	0.05	4	0.01	0.02	0.08	B	180
			Theaflavin-3,3'-digallate	0.01	4	0.01	0.00	0.03	B	180
			Theaflavin-3'-gallate	0.01	4	0.00	0.00	0.01	B	180
			Theaflavin-3-gallate	0.01	4	0.01	0.00	0.03	B	180
		Thearubigins	1.08	4	1.08	0.00	4.30	B	180	
		Flavones	Apigenin	0.17	3	0.17	0.00	0.50	C	73, 174
			Luteolin	0.17	3	0.17	0.00	0.50	C	73, 174
		Flavonols	Kaempferol	1.42	12	0.22	0.67	3.31	B	73, 110, 174, 180, 186
Myricetin	1.10		12	0.11	0.52	1.60	B	73, 110, 174, 180, 186		
Quercetin	2.69		12	0.26	1.40	4.10	B	73, 110, 174, 180, 186		
99069	Tea, green, brewed, decaffeinated	Flavan-3-ols	(-)-Epicatechin	6.16	2	0.85	5.31	7.01	B	180
			(-)-Epicatechin 3-gallate	7.57	2	1.15	6.42	8.72	B	180
			(-)-Epigallocatechin	16.02	2	0.46	15.56	16.48	B	180
			(-)-Epigallocatechin 3-gallate	26.05	2	0.69	25.36	26.73	B	180
			Theaflavin	0.12	2	0.08	0.04	0.20	B	180
			Theaflavin-3,3'-digallate	0.11	2	0.10	0.01	0.21	B	180
			Theaflavin-3'-gallate	0.04	2	0.04	0.00	0.08	B	180
			Theaflavin-3-gallate	0.11	2	0.09	0.02	0.20	B	180
		Thearubigins	8.78	2	3.14	5.65	11.92	B	180	
		Flavonols	Kaempferol	1.00	2	0.18	0.81	1.18	B	180
Myricetin	1.00		2	0.11	0.89	1.11	B	180		
Quercetin	2.77		2	0.37	2.40	3.13	B	180		
99068	Tea, green, brewed,	Flavan-3-ols	(-)-Epicatechin	4.45	5	0.50	3.77	6.38	B	180

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data			
	flavored		(-)-Epicatechin 3-gallate	5.11	5	0.74	3.09	7.69	B	180			
			(-)-Epigallocatechin	13.34	5	1.87	8.80	19.44	B	180			
			(-)-Epigallocatechin 3-gallate	19.97	5	3.05	12.77	29.78	B	180			
			Theaflavin	0.02	5	0.01	0.00	0.04	B	180			
			Theaflavin-3,3'-digallate	0.00	5	0.00	0.00	0.01	B	180			
			Theaflavin-3'-gallate	0.00	5		0.00	0.00	B	180			
			Theaflavin-3-gallate	0.00	5	0.00	0.00	0.02	B	180			
			Thearubigins	8.14	5	4.98	0.00	22.07	B	180			
		Flavonols	Kaempferol	0.54	5	0.05	0.36	0.64	B	180			
			Myricetin	0.58	5	0.04	0.48	0.73	B	180			
			Quercetin	1.69	5	0.12	1.34	2.07	B	180			
			99343	Tea, green, ready-to-drink	Flavan-3-ols	(-)-Epicatechin	1.98	2	0.11	1.88	2.09	B	180
						(-)-Epicatechin 3-gallate	0.93	2	0.06	0.87	0.98	B	180
(-)-Epigallocatechin	4.99	2				0.53	4.47	5.52	B	180			
(-)-Epigallocatechin 3-gallate	3.96	2				0.40	3.56	4.35	B	180			
Theaflavin	0.02	2				0.02	0.00	0.04	B	180			
Theaflavin-3,3'-digallate	0.00	2					0.00	0.00	B	180			
Theaflavin-3'-gallate	0.00	2					0.00	0.00	B	180			
Theaflavin-3-gallate	0.02	2				0.02	0.00	0.04	B	180			
Thearubigins	0.00	2					0.00	0.00	B	180			
Flavonols	Kaempferol	0.32			2	0.08	0.24	0.40	B	180			
	Myricetin	1.03	2	0.08	0.95	1.10	B	180					
	Quercetin	0.21	2	0.01	0.19	0.22	B	180					
99344	Tea, instant, decaffeinated, prepared	Flavan-3-ols	(-)-Epicatechin	0.07	4	0.07	0.00	0.30	B	180			
			(-)-Epicatechin 3-gallate	0.14	4	0.14	0.00	0.54	B	180			
			(-)-Epigallocatechin	0.25	4	0.23	0.00	0.94	B	180			
			(-)-Epigallocatechin 3-gallate	0.45	4	0.45	0.00	1.81	B	180			
			Theaflavin	0.01	4	0.01	0.00	0.03	B	180			
			Theaflavin-3,3'-digallate	0.01	4	0.01	0.00	0.03	B	180			
			Theaflavin-3'-gallate	0.00	4	0.00	0.00	0.01	B	180			
			Theaflavin-3-gallate	0.01	4	0.01	0.00	0.03	B	180			
			Thearubigins	8.38	4	9.03	-0.97	35.47	B	180			
		Flavonols	Kaempferol	0.38	4	0.15	0.02	0.69	B	180			
			Myricetin	0.49	4	0.30	0.00	1.36	B	180			
			Quercetin	0.60	4	0.25	0.05	1.16	B	180			
			99349	Tea, instant, diet, prepared	Flavan-3-ols	(-)-Epicatechin	0.25	4	0.23	0.00	0.93	B	180
(-)-Epicatechin 3-gallate	0.11	4				0.11	0.00	0.45	B	180			
(-)-Epigallocatechin	0.66	4				0.64	0.00	2.59	B	180			
(-)-Epigallocatechin 3-gallate	0.49	4				0.49	0.00	1.98	B	180			

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
			Theaflavin	0.00	4	0.00	0.00	0.01	B	180
			Theaflavin-3,3'-digallate	0.00	4		0.00	0.00	B	180
			Theaflavin-3'-gallate	0.00	4	0.00	0.00	0.00	B	180
			Theaflavin-3-gallate	0.00	4	0.00	0.00	0.01	B	180
			Thearubigins	10.19	4	1.84	5.20	14.00	B	180
		Flavonols	Kaempferol	0.12	4	0.08	0.02	0.35	B	180
		Myricetin	0.07	4	0.04	0.01	0.19	B	180	
		Quercetin	0.25	4	0.15	0.04	0.70	B	180	
		99350	Tea, instant, sweetened with sugar, plain and flavored, prepared	Flavan-3-ols	(-)-Epicatechin	0.24	8	0.08	0.00	0.62
(-)-Epicatechin 3-gallate	0.14				8	0.05	0.00	0.33	B	180
(-)-Epigallocatechin	0.54				8	0.20	0.00	1.75	B	180
(-)-Epigallocatechin 3-gallate	0.55				8	0.14	0.00	1.10	B	180
Theaflavin	0.00				8	0.00	0.00	0.03	B	180
Theaflavin-3,3'-digallate	0.00				8		0.00	0.00	B	180
Theaflavin-3'-gallate	0.00				8		0.00	0.00	B	180
Theaflavin-3-gallate	0.00				8	0.00	0.00	0.01	B	180
Thearubigins	27.95				8	5.58	8.64	55.67	B	180
Flavonols	Kaempferol			0.42	3	0.26	0.11	0.94	B	180
Myricetin	0.87			3	0.38	0.13	1.38	B	180	
Quercetin	0.34			3	0.25	0.08	0.84	B	180	
14367	Tea, instant, unsweetened, powder, prepared			Flavan-3-ols	(-)-Epicatechin	0.31	3	0.21	0.00	0.70
		Flavan-3-ols	(-)-Epicatechin 3-gallate	0.24	3	0.23	0.00	0.70	B	180
		(-)-Epigallocatechin	0.61	3	0.43	0.00	1.44	B	180	
		(-)-Epigallocatechin 3-gallate	0.86	3	0.80	0.00	2.46	B	180	
		Theaflavin	0.01	3	0.00	0.00	0.01	B	180	
		Theaflavin-3,3'-digallate	0.01	3	0.00	0.00	0.01	B	180	
		Theaflavin-3'-gallate	0.00	3	0.00	0.00	0.00	B	180	
		Theaflavin-3-gallate	0.01	3	0.00	0.00	0.01	B	180	
		Thearubigins	23.65	3	8.85	8.35	39.02	B	180	
		Flavonols	Kaempferol	0.32	3	0.15	0.07	0.57	B	180
		Myricetin	0.21	3	0.14	0.00	0.47	B	180	
		Quercetin	0.87	3	0.46	0.08	1.66	B	180	
		99071	Tea, oolong, brewed	Flavan-3-ols	(-)-Epicatechin	2.54	16	0.06	1.20	4.50
(-)-Epicatechin 3-gallate	6.33				16	0.69	0.30	12.10	B	86, 89, 96, 98
(-)-Epigallocatechin	6.10				16	0.29	1.80	16.37	B	86, 89, 96, 98
(-)-Epigallocatechin 3-gallate	34.48				16	4.76	7.36	71.10	B	86, 89, 96, 98
(+)-Catechin	0.23				13	0.02	0.00	0.70	B	89, 98
Flavones	Apigenin			0.00	1		0.00	0.00	C	73

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>†</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavonols	Luteolin	0.00	1		0.00	0.00	C	73
			Kaempferol	0.90	1		0.90	0.90	C	73
			Myricetin	0.49	1		0.49	0.49	C	73
			Quercetin	1.30	1		1.30	1.30	C	73
02049	Thyme, fresh ( <i>Thymus vulgaris</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
			Naringenin	0.00	1		0.00	0.00	D	199
		Flavones	Apigenin	2.50	2	2.50	0.00	5.00	C	80, 199
			Luteolin	45.25	2	5.75	39.50	51.00	C	80, 199
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	0.00	2		0.00	0.00	C	80, 199
Quercetin	0.00		2		0.00	0.00	C	80, 199		
11886	Tomato juice, canned, without salt added	Flavones	Apigenin	0.00	1		0.00	0.00	C	73
			Luteolin	0.00	1		0.00	0.00	C	73
		Flavonols	Kaempferol	0.06	7	0.02	0.00	0.08	C	73, 168
			Quercetin	1.46	7	0.46	1.27	1.58	C	73, 168
11547	Tomato products, canned, puree, without salt added	Flavonols	Kaempferol	0.08	9	0.02	0.03	0.13	C	168
			Quercetin	4.12	9	1.10	1.63	7.09	C	168
99011	Tomatoes, cherry, raw ( <i>Lycopersicon esculentum</i> var. <i>cerasiforme</i> )	Flavanones	Naringenin	3.19	1		3.19	3.19	D	140
		Flavones	Luteolin	0.00	1		0.00	0.00	C	6
		Flavonols	Kaempferol	0.10	67	0.01	0.00	0.27	B	6, 168
			Quercetin	2.76	91	0.21	0.17	20.30	B	6, 34, 140, 168
99051	Tomatoes, plum, raw ( <i>Lycopersicon esculentum</i> )	Flavonols	Kaempferol	0.00	3		0.00	0.00	C	168
			Quercetin	0.03	3		0.03	0.03	C	168
11531	Tomatoes, red, ripe, canned, whole, regular pack	Flavones	Apigenin	0.01	2		0.01	0.01	C	48
			Luteolin	0.02	2		0.02	0.02	C	48
		Flavonols	Kaempferol	0.01	2		0.01	0.01	C	48
			Quercetin	0.50	2		0.50	0.50	C	48
11530	Tomatoes, red, ripe, cooked	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68
			Delphinidin	0.00	8		0.00	0.00	A	68
			Malvidin	0.00	8		0.00	0.00	A	68
			Pelargonidin	0.00	8		0.00	0.00	A	68
			Peonidin	0.00	8		0.00	0.00	A	68
			Petunidin	0.00	8		0.00	0.00	A	68
		Flavan-3-ols	(-)-Epicatechin	0.00	5		0.00	0.00	B	68
			(-)-Epicatechin 3-gallate	0.00	5		0.00	0.00	B	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data	
			(-)-Epigallocatechin	0.00	5		0.00	0.00	B	68	
			(-)-Epigallocatechin 3-gallate	0.00	5		0.00	0.00	B	68	
			(+)-Catechin	0.00	5		0.00	0.00	B	68	
			(+)-Gallocatechin	0.00	5		0.00	0.00	B	68	
		Flavanones	Hesperetin	0.00	5		0.00	0.00	B	68	
			Naringenin	0.00	5		0.00	0.00	B	68	
		Flavones	Apigenin	0.00	10	0.00		0.00	0.01	A	48, 68
			Luteolin	0.01	6	0.00		0.00	0.02	B	48, 68
		Flavonols	Kaempferol	0.01	2			0.01	0.01	C	48
			Myricetin	0.01	10	0.00		0.00	0.03	A	48, 68
Quercetin	0.70		10	0.22		0.00	1.76	A	48, 68		
11529	Tomatoes, red, ripe, raw, year round average ( <i>Lycopersicon esculentum</i> )	Anthocyanidins	Cyanidin	0.00	8		0.00	0.00	A	68	
			Delphinidin	0.00	8		0.00	0.00	A	68	
			Malvidin	0.00	8		0.00	0.00	A	68	
			Pelargonidin	0.00	8		0.00	0.00	A	68	
			Peonidin	0.00	8		0.00	0.00	A	68	
			Petunidin	0.00	8		0.00	0.00	A	68	
		Flavan-3-ols	(-)-Epicatechin	0.00	13			0.00	0.00	A	8, 36, 68
			(-)-Epicatechin 3-gallate	0.00	13			0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin	0.00	13			0.00	0.00	A	8, 36, 68
			(-)-Epigallocatechin 3-gallate	0.00	13			0.00	0.00	A	8, 36, 68
			(+)-Catechin	0.00	13			0.00	0.00	A	8, 36, 68
			(+)-Gallocatechin	0.00	13			0.00	0.00	A	8, 36, 68
		Flavanones	Hesperetin	0.00	6			0.00	0.00	A	68
			Naringenin	0.68	11	0.16		0.00	1.50	A	68, 81
		Flavones	Apigenin	0.00	16	0.00		0.00	0.01	A	10, 48, 68, 74, 103
			Luteolin	0.00	14	0.00		0.00	0.02	B	6, 10, 48, 68, 74, 103
		Flavonols	Kaempferol	0.08	46	0.02		0.00	0.84	B	6, 10, 48, 74, 103, 168
			Myricetin	0.15	19	0.04		0.00	0.92	B	10, 48, 68, 74, 103, 151
			Quercetin	0.59	93	0.01		0.00	3.80	B	6, 10, 34, 48, 68, 74, 81, 103, 151, 168
		11696	Tomatoes, yellow, raw ( <i>Lycopersicon esculentum</i> )	Flavonols	Kaempferol	0.04	3		0.04	0.04	C
Quercetin	0.21				3		0.21	0.21	C	168	
99364	Tree Spinach ( <i>Cnidioscolus acitifolius/chayamansa</i> )	Flavonols	Kaempferol	3.72	4	1.00	1.81	5.82	C	91	
			Quercetin	2.54	4	1.04	0.00	4.47	C	91	
11568	Turnip greens, raw ( <i>Brassica rapa (Rapifera)</i> )	Flavones	Apigenin	0.00	2		0.00	0.00	C	74	
			Luteolin	0.00	2		0.00	0.00	C	74	

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
	Group))	Flavonols	Kaempferol	11.87	5	4.51	4.80	16.59	B	74, 151
			Myricetin	0.00	2		0.00	0.00	C	74
			Quercetin	0.73	2		0.73	0.73	C	74
99351	Vinegar, cider (Germany)	Flavan-3-ols	(-)-Epicatechin	0.82	2	0.28	0.54	1.10	C	4
			(+)-Catechin	4.85	2	0.95	3.90	5.80	C	4
		Flavonols	Quercetin	0.68	2	0.68	0.00	1.35	C	4
99109	Vinegar, wine, red	Anthocyanidins	Cyanidin	0.00	1		0.00	0.00	C	4
			Delphinidin	0.08	1		0.08	0.08	C	4
			Malvidin	0.43	1		0.43	0.43	C	4
			Peonidin	0.07	1		0.07	0.07	C	4
			Petunidin	0.08	1		0.08	0.08	C	4
		Flavan-3-ols	(-)-Epicatechin	2.20	1		2.20	2.20	C	4
99108	Vinegar, wine, white	Flavan-3-ols	(-)-Epicatechin	0.60	2	0.60	0.00	1.20	C	4
			(+)-Catechin	3.60	2	1.20	2.40	4.80	C	4
11587	Vinespinach, (basella), raw ( <i>Basella alba</i> )	Flavones	Apigenin	62.20	6	22.71	62.10	62.31	C	151
99107	Water spinach ( <i>Ipomoea aquatica</i> )	Flavones	Apigenin	0.01	1		0.01	0.01	D	30
			Luteolin	0.04	1		0.04	0.04	D	30
		Flavonols	Kaempferol	0.00	1		0.00	0.00	D	30
			Myricetin	0.03	1		0.03	0.03	D	30
			Quercetin	0.18	1		0.18	0.18	D	30
11591	Watercress, raw ( <i>Nasturtium officinale</i> )	Flavanones	Hesperetin	0.00	1		0.00	0.00	C	80
		Flavones	Apigenin	0.01	5	0.00	0.00	0.01	C	48, 80
			Luteolin	0.02	5	0.01	0.00	0.02	C	48, 80
		Flavonols	Isorhamnetin	0.00	1		0.00	0.00	C	80
			Kaempferol	1.40	5	0.57	1.00	1.50	C	48, 80
			Myricetin	0.20	4		0.20	0.20	C	48
Quercetin	7.44		5	3.10	4.00	8.30	C	48, 80		
09326	Watermelon, raw ( <i>Citrullus lanatus</i> )	Anthocyanidins	Cyanidin	0.00	3		0.00	0.00	B	68
			Delphinidin	0.00	3		0.00	0.00	B	68
			Malvidin	0.00	3		0.00	0.00	B	68
			Pelargonidin	0.00	3		0.00	0.00	B	68
			Peonidin	0.00	3		0.00	0.00	B	68
			Petunidin	0.00	3		0.00	0.00	B	68
		Flavan-3-ols	(-)-Epicatechin	0.00	7		0.00	0.00	A	68
			(-)-Epicatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin	0.00	7		0.00	0.00	A	68
			(-)-Epigallocatechin 3-gallate	0.00	7		0.00	0.00	A	68
			(+)-Catechin	0.00	7		0.00	0.00	A	68

# USDA Database for the Flavonoid Content of Selected Foods, Release 2 (2006)

(For mean, standard error, min and max units = mg/100 g, edible portion)

NDB No.	Food Description	Class	Flavonoid	Mean <sup>1</sup>	N	Standard Error	Min	Max	CC	Sources of Data
		Flavanones	(+)-Gallocatechin	0.00	7		0.00	0.00	A	68
			Hesperetin	0.00	7		0.00	0.00	A	68
			Naringenin	0.00	7		0.00	0.00	A	68
		Flavones	Apigenin	0.00	5		0.00	0.00	B	68, 102, 152
			Luteolin	0.61	3	0.61	0.00	1.84	B	68, 102, 152
		Flavonols	Kaempferol	0.00	2		0.00	0.00	C	102, 152
			Myricetin	0.00	5		0.00	0.00	B	68, 102, 152
			Quercetin	0.00	5		0.00	0.00	B	68, 102, 152
		11200	Yardlong bean, cooked, boiled, drained, without salt	Anthocyanidins	Cyanidin	1.10	2		1.10	1.10
Delphinidin	0.02				2		0.02	0.02	C	48
Pelargonidin	0.02				2		0.02	0.02	C	48
Flavones	Apigenin			0.01	2		0.01	0.01	C	48
	Luteolin			0.02	2		0.02	0.02	C	48
Flavonols	Kaempferol			0.50	2		0.50	0.50	C	48
	Myricetin			0.03	2		0.03	0.03	C	48
	Quercetin			5.30	2		5.30	5.30	C	48
99361	Yuzu, raw ( <i>Citrus junos</i> )			Flavanones	Hesperetin	28.73	60	3.64	26.64	30.32
		Naringenin	24.82		60	3.15	22.80	26.12	C	196

USDA Database for the Flavonoid Content of Dried Teas, Release 2 (2006)

(For mean, standard error, min and max units=mg/100 g, edible portion)

99060	Tea leaves, black, dry	Flavan-3-ols	(-)-Epicatechin	255.19	83	9.97	60	1095	B	9, 23, 40, 85, 89, 96, 110, 151, 180		
			(-)-Epicatechin 3-gallate	688.27	83	28.07	50	2377.5	B	9, 23, 40, 85, 89, 96, 110, 151, 180		
			(-)-Epigallocatechin	956.81	83	57.09	20	3817.5	B	9, 23, 40, 85, 89, 96, 110, 151, 180		
			(-)-Epigallocatechin 3-gallate	1121.92	83	64.31	142.5	5092.5	B	9, 23, 40, 85, 89, 96, 110, 151, 180		
			(+)-Catechin	137.82	68	4.48	0	480	B	9, 40, 85, 89, 110, 151		
			(+)-Catechin 3-gallate	50.83	3		50.83	50.83	C	151		
			(+)-Gallocatechin	91.73	11	28.84	0	278	B	9, 151		
			theaflavin	159.20	42	13.03	45	527	B	40, 151, 167, 180		
			theaflavin-3,3'-digallate	170.77	39	19.50	7.5	496	B	40, 167, 180		
			theaflavin-3'-gallate	155.77	39	16.10	15	413	B	40, 167, 180		
			theaflavin-3-gallate	132.25	42	8.70	7.5	307.88	B	40, 151, 167, 180		
			Thearubigins	5919	11	563.	3914.3	10506.	B	180		
			Flavones	apigenin	0.00	17		0	0	B	73, 151	
		luteolin		0.00	14		0	0	B	73		
		Flavonols	kaempferol	126.66	42	4.99	24.8	231	B	73, 110, 131, 151, 180, 186		
			myricetin	42.24	31	1.23	21	74.349	A	73, 110, 151, 180, 186		
			quercetin	199.75	42	12.86	41.3	374.73	B	73, 110, 131, 151, 180, 186		
		99345	Tea leaves, black, dry, decaffeinated	Flavan-3-ols	(-)-Epicatechin	77.53	5	34.28	30.4	210	B	85, 180
					(-)-Epicatechin 3-gallate	81.99	5	35.01	22.3	180	B	85, 180
(-)-Epigallocatechin	51.45				5	11.08	32.2	91.168	B	85, 180		
(-)-Epigallocatechin 3-gallate	136.86				5	56.74	43.8	320	B	85, 180		
(+)-Catechin	0.00				1		0	0	C	85		
Theaflavin	31.29				4	15.79	7.3	77.773	B	180		
Theaflavin-3,3'-digallate	38.84				4	32.98	0	136.91	B	180		
Theaflavin-3'-gallate	15.80				4	13.24	0	55.117	B	180		
Theaflavin-3-gallate	37.17				4	21.89	9.8	102.56	B	180		
Thearubigins	44121			4	101.44	4144.1	4636.8	B	180			
Flavonols	Kaempferol			112.36	4	18.02	90.1	166.02	B	180		
	Myricetin			30.10	4	4.64	23.2	43.808	B	180		
	Quercetin			256.02	4	17.95	221	303.78	B	180		
99061	Tea leaves, green, dry	Flavan-3-ols	(-)-Epicatechin	811.72	68	21.10	190	2000	B	23, 85, 89, 96, 98, 110, 134, 151, 180		
			(-)-Epicatechin 3-gallate	1491.29	68	112.42	340	4630	B	23, 85, 89, 96, 98, 110, 134, 151, 180		
			(-)-Epigallocatechin	2057.98	68	103.55	100	5477.4	B	23, 85, 89, 96, 98, 110, 134, 151, 180		
			(-)-Epigallocatechin 3-gallate	7115.98	68	632.06	1600	20320	B	23, 85, 89, 96, 98, 110, 134, 151, 180		
			(+)-Catechin	57.12	38	3.40	0	252.88	B	85, 89, 98, 110, 151		
			(+)-Catechin 3-gallate	7.07	6	1.83	0	14.14	C	151		
			(+)-Gallocatechin	258.11	6	80.69	69.46	446.76	C	151		
			Theaflavin	1.64	10	0.74	0	6.2451	B	151, 180		
Theaflavin-3,3'-digallate	1.08	4	0.63	0	2.3947	B	180					



USDA Database for the Flavonoid Content of Dried Teas, Release 2 (2006)

(For mean, standard error, min and max units=mg/100 g, edible portion)

			Theaflavin-3'-gallate	0.44	4	0.26	0	0.9933	B	180
			Theaflavin-3-gallate	0.47	10	0.32	0	2.7387	B	151, 180
			Thearubigins	131.91	4	131.91	0	527.62	B	180
		Flavones	apigenin	12.03	9	2.86	0	23.76	B	73, 151, 174
			luteolin	0.17	3	0.17	0	0.5	C	73, 174
		Flavonols	kaempferol	147.55	18	4.40	77.611	331	B	73, 110, 151, 174, 180, 186
			myricetin	104.76	18	7.94	31.16	164.41	B	73, 110, 151, 174, 180, 186
			quercetin	223.97	18	9.60	54.36	405	B	73, 110, 151, 174, 180, 186
99346	Tea leaves, green, dry, decaffeinated	Flavan-3-ols	(-)-Epicatechin	423.02	3	215.25	14.928	745.80	B	180
			(-)-Epicatechin 3-gallate	522.01	3	265.04	23.609	927.54	B	180
			(-)-Epigallocatechin	1153.49	3	463.53	227.53	1655.4	B	180
			(-)-Epigallocatechin 3-gallate	1843.64	3	785.38	274.93	2697.4	B	180
			Theaflavin	8.23	3	6.57	0	21.208	B	180
			Theaflavin-3,3'-digallate	7.59	3	7.13	0	21.836	B	180
			Theaflavin-3'-gallate	2.94	3	2.73	0	8.3848	B	180
			Theaflavin-3-gallate	7.94	3	6.92	0	21.737	B	180
			Thearubigins	972.52	3	220.81	540.55	1268.0	B	180
		Flavonols	Kaempferol	89.38	3	18.58	64.510	125.72	B	180
			Myricetin	91.52	3	13.98	70.810	118.13	B	180
			Quercetin	263.95	3	34.59	229.08	333.13	B	180
99062	Tea leaves, oolong, dry	Flavan-3-ols	(-)-Epicatechin	248.42	18	16.30	120	450	B	89, 96, 98, 151
			(-)-Epicatechin 3-gallate	627.25	18	45.40	170	1210	B	89, 96, 98, 151
			(-)-Epigallocatechin	750.80	18	94.10	180	1640	B	89, 96, 98, 151
			(-)-Epigallocatechin 3-gallate	3412.62	18	360.53	736	7110	B	89, 96, 98, 151
			(+)-Catechin	30.63	16	4.01	5	70	B	89, 98, 151
			(+)-Catechin 3-gallate	19.89	3		19.89	19.89	C	151
			(+)-Gallocatechin	305.69	3		305.69	305.69	C	151
			Theaflavin	15.23	3		15.23	15.23	C	151
			Theaflavin-3-gallate	18.62	3		18.62	18.62	C	151
		Flavones	Apigenin	0.00	4		0	0	B	73, 151
			Luteolin	0.00	1		0	0	C	73
		Flavonols	Kaempferol	62.40	4	19.67	53.2	90	B	73, 151
			Myricetin	61.85	4	26.66	49	66.14	B	73, 151
			Quercetin	108.83	4	40.94	101.77	130	B	73, 151

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Grapefruit, Lemon, Lime, Mandarin, Pummelo, Sour Orange, Sweet Orange.

Eriocitrin, Hesperidin, Naringin, Narirutin.

*Technical Bulletin Number 1856, ARS, USDA, December 1998.*

**15. Betés-Saura, C., Andrés-Lacueva, C., and Lamuela-Raventós, R. M.**

Phenolics in white free run juices and wines from Penedés by high performance liquid chromatography: Changes during vinification.

*J. Agric. Food Chem.*, 1996, 44, 3040-3046.

White free run grape juice, Wine.

Catechin, Epicatechin, Quercetin.

**16. Bermudez-Soto, M. J., and Tomás-Barberan, F. A.**

Evaluation of commercial red fruit juice concentrates as ingredients for antioxidant functional juices.

*Eur. Food Res Technol.*, 2004, 219, 133-141.

Juice concentrates of Chokeberry, Elderberry, Blackcurrant, Strawberry, red Grape, Redcurrant, Cherry, Plum, Raspberry.

Cyanidin, Delphinidin, Flavan-3-ols, Myricetin, Quercetin.

**17. Bilyk, A., and Sapers, G. M.**

Varietal differences in the quercetin, kaempferol, and myricetin contents of highbush blueberry, cranberry, and thornless blackberry fruits.

*J. Agric. Food Chem.*, 1986, 34, 585-588.

Highbush blueberry (Earliblue, Weymouth, Coville, Bluetta), Cranberry (Stevens, Early black, Ben Lear, Franklin, McFarlin, Howes), Thornless Blackberry (Smoothstem, Black Satin, Dirksen Thornless, Hull Thornless, Thornfre).

Kaempferol, Quercetin.

**18. Bilyk, A., and Sapers, G. M.**

Distribution of quercetin and kaempferol in lettuce, kale, chive, garlic chive, leek, horseradish, red radish, and red cabbage tissues.

*J. Agric. Food Chem.*, 1985, 33, 226-228.

Lettuce (Augusta, Buttercrunch, Minneto, Summer Bibb, Tom Tumb, Barcarolle, Burpee Bibb, Fordhook, Paris White), Chive, Garlic chive, Leek, Kale (Dwarf Siberian, Vates BlueCurled Dwar), Red cabbage, Horse radish, Red radish.  
Kaempferol, Quercetin.

- 19. Bilyk, A., Cooper, P. L., and Sapers, G. M.**  
Varietal differences in distribution of quercetin and kaempferol in onion (*Allium cepa* L.) Tissue.  
*J. Agric. Food Chem.*, 1984, 32, 274-276.  
Onions (Carmen hybrid, Sweet Spanish Utah, Early Yellow Globe, Yellow Globe Hybrid, Sweet Spanish Hybrid, Red Hamburger, Walla Walla, Evergreen Long White Bunching).  
Kaempferol, Quercetin.
- 20. Bonvehi, J. S. and Coll, F.**  
Evaluation of bitterness and astringency of polyphenolic compounds in cocoa powder.  
*Food Chemistry*, 1997, 60(3), 365-370.  
Cocoa powder.  
Epicatechin.
- 21. Bonvehí, J. S., Torrentó, M. S., and Lorente, E. C.**  
Evaluation of polyphenolic and flavonoid compounds in honeybee-collected pollen produced in Spain.  
*J. Agric. Food Chem.*, 2001, 49, 1848-1853.  
Honeybee-collected pollen.  
Isorhamnetin, Kaempferol, Myricetin, Quercetin.
- 22. Breitfellner, F., Solar, S., and Sontag, G.**  
Radiation induced chemical changes of phenolic compounds in strawberries.  
*Radiat. Phys. Chem.*, 2003, 67, 497-499.  
Strawberries (whole, full red).  
(+)-Catechin, (-)-Epicatechin, Kaempferol-3-glucoside, Quercetin-3-glucoside.
- 23. Bronner, W. E., and Beecher, G. R.**  
Method of determining the content of catechins in tea infusions by high-performance liquid chromatography.  
*J. Chromatogr. A*, 1998, 805, 137-142.  
Black tea, Green tea, Jasmine tea.  
Epicatechin, Epicatechin-gallate, Epigallocatechin, Epigallocatechin-gallate.
- 24. Bronner, W. E., and Beecher, G. R.**  
Extraction and measurement of prominent flavonoids in orange and grapefruit juice concentrates.  
*J. Chromatogr. A*, 1995, 705, 247-256.

Orange juice concentrate, Grapefruit concentrate.  
Hesperidin, Naringin, Narirutin.

- 25. Burda, S., Oleszek, W., and Lee, C. Y.**  
Phenolic compounds and their changes in apples during maturation and cold storage.  
*J. Agric. Food Chem.*, 1990, 38, 945-948.  
Apples (Golden Delicious, Empire, Rhode Island Greening).  
Epicatechin, Quercetin glucosides.
- 26. Careri, M., Elviri, L. Mangia, A., and Musci, M.**  
Spectrophotometric and coulometric detection in the high-performance liquid chromatography of flavonoids and optimization of sample treatment for the determination of quercetin in orange juice.  
*J. Chromatogr. A*, 2000, 881, 449-460.  
Orange juice.  
Eriocitrin, Hesperidin, Naringin, Narirutin, Quercetin.
- 27. Chang, Q., and Wong, Y-S.**  
Identification of flavonoids in Hakmeitau beans (*Vigna sinensis*) by high-performance liquid chromatography-electron-spray mass spectrometry (LC-ESI/MS).  
*J. Agric. Food Chem.*, 2004, 52, 6694-6699.  
Hakmeitau (black seed cultivar of cow pea).  
Myricetin, Peonidin, Petunidin, Quercetin.
- 28. Chaovanalikit, A., and Wrolstad, R. E.**  
Anthocyanin and polyphenolic composition of fresh and processed cherries.  
*J. Food Sci.*, 2004, 69(1), 73-83.  
Sweet Cherries (Bing-fresh, frozen, canned; Royal Ann, Rainier), Sour cherries (Montmorency).  
Cyanidin, Pelargonodin, Peonidin, Petunidin.
- 29. Chen, H., Zuo, Y., and Deng, Y.**  
Separation and determination of flavonoids and other phenolic compounds in cranberry juice by high-performance liquid chromatography.  
*J. Chromatogr. A*, 2001, 913, 387-395.  
Cranberry juice.  
Catechin, Myricetin, Quercetin.
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Flavonoid content of several vegetables and their antioxidant activity.  
*J. Sci. Food Agric.*, 2000, 80, 561-566.  
Perilla, Sponge gourd, Water spinach, Sweet potato leaves (green), Sweet potato leaves (purple), Leaf lettuce, Chinese kale, Red malabar nightshade, Cucumber, Purple cabbage, Crown daisy, Spinach, Chinese cabbage, White cabbage, Gynura,

Onion (interior), Onion (outer leaves), Potato.  
Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin.

- 31. Chun, O.K., Kim, D-O., Moon, H.Y., Kang, H.G., and Lee, C.Y.**  
Contribution of individual polyphenolics to total antioxidant capacity of plums.  
*J. Agric. Food Chem.*, 2003, 51, 7240-7245.  
Plums (Beltsville Elite, Cacaks Best, Castlton, Early Magic, Empress, Longjhon, Mirabellier, Ny101, N6, N9, Stanley).  
Cyanidin, Peonidin, Quercetin.
- 32. Cortacero-Ramírez, S., Segura-Carretero, A., Cruces-Blanco, C., Romer-Romero, M. L., and Fernández-Gutiérrez, A.**  
Simultaneous determination of multiple constituents in real beer samples of different origins by capillary zone electrophoresis.  
*Anal. Bioanal. Chem.*, 2004, 380, 831-837.  
Beers.  
Epicatechin, Rutin.
- 33. Crozier, A., Jensen, E., Lean, M. E. J., and McDonald, M. S.**  
Quantitative analysis of flavonoids by reversed-phase high-performance liquid chromatography.  
*J. Chromatogr. A*, 1997, 761, 315-321.  
Onion, Celery.  
Apigenin, Luteolin, Quercetin.
- 34. Crozier, A., Lean, M. E. J., McDonald, M. S., and Black, C.**  
Quantitative analysis of the flavonoid content of commercial tomatoes, onions, lettuce, and celery.  
*J. Agric. Food Chem.*, 1997, 45, 590-595.  
Tomatoes (Spanish varieties, Scottish, Dutch beef, Spanish cherry, English cherry), Onions (red, white), Lettuce (Round, Green salad, Lollo Biondo), Celery (green and white), Tomatoes (Scottish) - cooked, Onions (White) - cooked.  
Apigenin, Luteolin, Quercetin.
- 35. de Freitas, V. A. P., Glories, Y., and Monique, A.**  
Developmental changes of procyanidins in grapes of red *Vitis vinifera* varieties and their composition in respective wines.  
*Am. J. Enol. Vitic.*, 2000, 51(4), 397-403.  
Wine-Merlot and Cabernet Sauvignon.  
Catechin, Epicatechin, Epicatechin gallate.
- 36. de Pascual-Teresa, S., Santos-Buelga, C., and Rivas-Gonzalo, J. C.**  
Quantitative analysis of flavan-3-ols in Spanish foodstuffs and beverages.  
*J. Agric. Food Chem.*, 2000, 48, 5331-5337.  
Apple (Golden), Apple (Granny Smith), Apple Renette, Apple (Red Delicious), Apricot, Avocado, Banana, Blackberry, Blueberry, Cherry, Chestnut, Custard apple,

Early fig, Grape (red), Grape (white), Kiwi, Medlar, Peach, Pear (Blanquilla), Pear (Conferencia), Persimmon, Pineapple, Plum, Pomegranate, Quince, Raspberry, Redcurrent, Strawberry, Strawberry tree fruit, Aubergine, Broad bean, Carrot, Courgette, Lettuce, Onion, Pea, Pepper (red), Pepper (green), Tomato, Chickpea, French bean, Lentil, Pinto bean, White bean, Cider, Coffee, Soluble cacao, Tea (black), Tea (green), Wine (red), Wine (rose), Wine (white), Beer, Bee pollen, Chocolate, Wheat flour.

Catechin, Epigallocatechin, Epicatechin, Epigallocatechin gallate, Epicatechin-3O-gallate, Gallocatechin.

- 37. del Caro, A., Piga, A., Vacca, V., and Agabbio, M.**  
Changes of flavonoids, vitamin C, and antioxidant capacity in minimally processed citrus segments and juices during storage.  
*Food Chemistry*, 2004, 84, 99-105.  
Oranges (Shamouti and Salustiana— segments and juice), Mandarin (Palazelli - segments), Red blush grapefruit juice, Minneola tangelo.  
Hesperidin, Naringin, Narirutin, Neohesperidin.
- 38. del Mar Verde Méndez, C., Foster, M. P., Rodríguez-Delgado, M. Á., Rodríguez-Rodríguez, E.M., and Romero, C.D.**  
Content of free phenolic compounds in bananas from Tenerife (Canary Islands) and Ecuador.  
*Eur. Food Res. Technol*, 2003, 21, 287-290.  
Bananas (greenhouse, organic, outdoor).  
Catechin.
- 39. Dietrych-Szostak, D., and Oleszek, W.**  
Effect of processing on the flavonoid content in buckwheat (*Fagopyrum esculentum* Möench) grain.  
*J. Agric. Food Chem.*, 1999, 47, 4383-4387.  
Buckwheat.  
Apigenin, Rutin.
- 40. Ding, Z., Kuhr, S., and Engelhardt, U. H.**  
Influence of catechins and theaflavins on the astrigent taste of black tea brews.  
*Z Lebensm Unters Forsch*, 1992, 195, 108-111.  
Black tea.  
Catechin, Epicatechin, Epicatechin-gallate, Epigallocatechin, Epigallocatechin-gallate.
- 41. Dougherty, M. H., and Fisher, J. F.**  
Quality of commercial, canned, single-strength grapefruit juice produced in Florida during the 1975-76 and 1976-77 citrus season.  
*Proc. Fla. State Hort. Soc.*, 1977, 90, 168-170.  
Grapefruit juice, canned, single strength.  
Naringin.



42. **Dugo, P., Favoino, O., Presti, M. L., Luppino, R., Dogo, G., and Mondello, L.**  
Determination of anthocyanins and related components in red wines by micro- and capillary HPLC.  
*J. Sep. Sci.*, 2004, 27, 1458-1466.  
Red wine (Cabernet Sauvignon).  
Cyanidin, Delphinidin, Malvidin, Peonidin, Petunidin.
43. **Dugo, G., Saitta, M., Guifrida, F., Vilasi, F., and La Torre, G. L.**  
Determination of resveratrol and other phenolic compounds in experimental wines from grapes subjected to different pesticide treatments.  
*Ital. J. Food Sci.*, 2004, 16, 305-321.  
White wines (from Compañia and Sicily), Red wines (Tuscany).  
Isorhamnetin, Kaempferol, Myricetin, Quercetin, Rutin.
44. **DuPont, M. S., Mondin, Z., Williamson, G., and Price, K. R.**  
Effect of variety, processing, and storage on the flavonoid glycoside content and composition of lettuce and endive.  
*J. Agric. Food Chem.*, 2000, 48(9), 3957-3964.  
Lettuce (Varieties: iceberg, green batavia, cos remus, green salad bowl, green oak leaf, red oak leaf, lollo biondo, lollo rosso), Endive (Varieties: fine frisee, escarole, coarse frisee).  
Cyanidin glucosides, Kaempferol glucosides, Luteolin 7-O-glucuronide, Quercetin glucosides.
45. **Ewald, C., Fjelkner-Modig, S., Johansson, K., Sjöholm, I., and Åkesson, B.**  
Effect of processing on major flavonoids in processed onions, green beans, and peas.  
*Food Chem.*, 1999, 64, 231-235.  
Onion - raw, cooked, Green beans - raw, cooked, Peas - raw, cooked.  
Kaempferol, Quercetin,.
46. **Fan-Chiang H-J., and Wrolstad, R. E.**  
Anthocyanin pigment composition of blackberries.  
*Journal of Food Science*, 2005, 70 (3), C198-C202.  
Blackberries and blackberry juice.  
Cyanidin.
47. **Ferreres, F., Gil, M. I., and Tomás-Barberán, F. A.**  
Anthocyanins and flavonoids from shredded red onion and changes during storage in perforated films.  
*Food Res. Int.*, 1996, 29, 389-395.  
Onion, red-shredded.  
Cyanidin glucosides, Quercetin glucosides.

- 48. Franke, A. A., Custer, L. J., Arakaki, C., and Murphy, S. P.**  
 Vitamin C and flavonoid levels of fruits and vegetables consumed in Hawaii.  
*J. Food Comp. Anal.*, 2004, 17, 1-35.  
 Vegetables: Beans-cooked (snap, yardlong), Broccoli, Cabbage-raw & cooked (bok choy/green, pak choy, red, won bok), Choi sum, Eggplant-cooked (long), Lettuce, Onion (green, red, yellow, local 'Maui'), Peas-cooked from frozen (green), Potato leaves (sweet), Potato (Sweet, Orange), Potato-cooked (sweet, purple), Spinach, Taro leaves-raw & cooked, Tomato (boiled, canned), Watercress;  
 Fruits: Apple-with and without skin (Fuji, Red Delicious), Blueberries-raw & frozen, Cranberry juice cocktail, Cranberry sauce (jellied), Cranberry (dried, sweetened), Grapefruit (Ruby Red, White), Grape jelly, Grape juice (unsweetened), Grapes-raw (red, seedless), Mango (Hayden, local), Oranges (Local Ka'u, Navel), Papaya, Pineapple, Plum (black, red), Pomelo, Raspberries-frozen, Strawberries-raw & frozen, Tangerines; (Dried Fruits) Prunes (dried, pitted), Raisins;  
 Juices & Jams: Grape jam, Grape juice, Guava jam.  
 Apigenin, Cyanidin, Delphinidin, Hesperetin, Hesperidin, Kaempferol, Luteolin, Myricetin, Naringenin, Naringin, Narirutin, Neohesperidin, Pelargonidin, Quercetin.
- 49. Frankel, E. N., Waterhouse, A. I., and Teissedre, P. L.**  
 Principal phenolic phytochemicals in selected California wines and their antioxidant activity in inhibiting oxidation of human low-density lipoproteins.  
*J. Agric. Food Chem.*, 1995, 43, 890-894.  
 Red and White wines - California.  
 Catechin, Cyanidin, Epicatechin, Malvinidin, Myricetin, Quercetin, Rutin.
- 50. Fuleki, T. and Ricardo da Silva, J.M.**  
 Catechin and procyanidin composition of seeds from grape cultivars grown in Ontario.  
*J. Agric. Food Chem.*, 1997, 45, 1156-1160.  
 Grapes red and white (vinifera, hybrid, labrusca).  
 Catechin, Epicatechin.
- 51. Gamache, P., Ryan, E., and Acworth, I. N.**  
 Analysis of phenolic and flavonoid compounds in juice beverages using high-performance liquid chromatography with coulometric array detection.  
*J. Chromatogr.*, 1993, 635, 143-150.  
 Orange juice (Blend, Navel, Hamlin, Valencia)  
 Hesperidin, Naringin, Narirutin.
- 52. Gambelli, L., and Santorini, G. P.**  
 Polyphenols content in some Italian red wines of different geographical origins.  
*J. Food Comp. Anal.*, 2004, 17, 613-618.  
 Red wines: Puglia region (Montepulciano/Troia, Troia, Primitivo/Tarantino), Molise region (Montepulciano/Aglianico, aglianico), Cabernet sauvignon (Friuli, Chile, California).

Apigenin, Cyanidin, Delphinidin, Malvidin, Myricetin, Peonidin, Petunidin, Quercetin.

- 53. Gao, L., and Mazza, G.**  
Characterization, quantitation, and distribution of anthocyanins and colorless phenolics in sweet cherries.  
*J. Agric. Food Chem.*, 1995, 43, 343-346.  
Cherries - sweet, 7 cultivars.  
Cyanidin, Pelargonidin, Peonidin.
- 54. Gao, L., and Mazza, G.**  
Quantitation and distribution of simple and acylated anthocyanins and other phenolics in blueberries.  
*J. Food Sci.*, 1994, 59, 1057-1059.  
Blueberries -10 lowbush and 2 highbush varieties.  
Cyanidin, Delphinidin, Malvidin, Peonidin, Petunidin.
- 55. Garcia-Vigera, C., Zafrilla, P., and Tomás-Barberán, F. A.**  
The use of acetone as an extraction solvent for anthocyanins from strawberry fruit.  
*Phytochem. Anal.*, 1998, 9, 274-277.  
Strawberries (Camarosa – fresh, frozen; Chandler, Oso Grnade, and Tudla – frozen).  
Cyanidin, Pelargonidin.
- 56. Gennaro, L., Leonardi, C., Esposito, F., Salucci, M., Maiani, G., Quaglia, G., and Fogliano, V.**  
Flavonoid and carbohydrate contents in tropea red onions: Effects of homelike peeling and storage.  
*J. Agric. Food Chem.*, 2002, 50, 1904-1910.  
Tropea red onion.  
Cyanidin conjugates, Delphinidin 3-glucosylglucoside, Quercetin 4'-glucoside.
- 57. Ghiselli, A., Nardini, M., Baldi, A., and Scaccini, C.**  
Antioxidant activity of different phenolic fractions separated from an Italian red wine.  
*J. Agric. Food Chem.*, 1998, 46(2), 361-367.  
Italian red wine.  
Catechin, Cyanidin, Delphinidin, Epicatechin, Kaempferol, Malvidin, Myricetin, Peonidin, Petunidin, Quercetin.
- 58. Gil, M. I., Ferreres, F., Ortiz, A., Subra, E., and Tomás-Barberán, F. A.**  
Plant phenolic metabolites and floral origin of Rosemary honey.  
*J. Agric. Food Chem.*, 1995, 43, 2833-2838.  
Rosemary honey.  
Apigenin, Isorhamnetin, Kaempferol, Luteolin, Quercetin.

59. **Giuffrida, D., Salvo, F., Ziino, M., Toscano, G., and Dugo, G.**  
Initial investigation on some chemical constituents of capers (*Capparis Spinosa L.*) from the island of Salina.  
*Ital. J. Food Sci.*, 2002, 14(1), 25-33.  
Capers-raw & pickled.  
Kaempferol, Kaempferol-3-rutinoside, Quercetin, Rutin.
60. **Goldberg, D. M., Karumanchiri, A., Tsang, E., and Soleas, G. J.**  
Catechin and epicatechin concentrations of red wines: regional and cultivar-related differences.  
*Am. J. Enol. Vitic.*, 1998, 49(1), 23-34.  
Red wines (from Australia, Bordeaux, Burgundy, California, Beaujolais, Canada, Central Europe, Italy, Midi & Provence, Pacific Northwest, Iberian Peninsula, South Africa, Rhone Valley, & South America).  
Catechin, Epicatechin.
61. **Goldberg, D. M., Tsang, E., Karumanchiri, A., Diamandis, E. P., Doleas, G., and Ng, E.**  
Method to assay the concentrations of phenolic constituents of biological interest in wines.  
*Anal. Chem.*, 1996, 68, 1688-1694.  
Red wines  
Catechin, Epicatechin, Quercetin, Rutin.
62. **Gómez-Plaza, E., Gil-Muñoz, R., López-Roca, J. M., Martínez, A.**  
Color and phenolic compounds of a young red wine as discriminating variables of its status.  
*Food Res. Int.*, 1999, 32, 503-507.  
Red wines.  
Catechin, Delphinidin, Epicatechin, Malvidin, Peonidin, Petunidin.
63. **Grandi, R., Trifiro, A., Gherardi, S. Calza, M., and Sacconi G.**  
Characterization of lemon juice on the basis of flavonoid content.  
*Fruit Processing*, 1994, 11, 355-359.  
Lemon juice (fresh, commercial).  
Eriocitrin, Hesperidin.
64. **Guillen, D.A., Barroso, C. G., Perez-Bustamante, J. A.**  
Automation of sample preparation as a preliminary stage in the high-performance liquid chromatographic determination of polyphenolic compounds in sherry wines.  
*J. Chromatogr. A*, 1996, 730(1/2), 39-46.  
Sherry wines (Fino, Amontillado, Oloroso).  
Catechin.
65. **Häkkinen, S. H., Kärenlampi, S. O., Mykkänen, H. M., and Törrönen, A. R.**  
Influence of domestic processing and storage on flavonol contents in berries.

*J. Agric. Food Chem.*, 2000, 48, 2960-2965.

Strawberry, Raspberry (red), Currant (black), Bilberry, Lingonberry, Strawberry jam, Bilberry soup, Lingonberries (crushed), Lingonberry juice, Black currant juice - steam extracted, Black currant juice - cold-pressed with pectinase, Crowberry juice - cold-pressed with pectinase, Crowberry juice - cold-pressed without pectinase. Kaempferol, Myricetin, Quercetin.

**66. Häkkinen, S. H., Törrönen, A. R.**

Content of flavonols and selected phenolic acids in strawberries and *Vaccinium* species: influence of cultivar, cultivation site and technique.

*Food Res. Int.*, 2000, 33, 517-524.

Strawberry (Senga Sengana, Korona, Bounty, Polka, Polka (organic), Jonsok, Jonsok (organic), Honeoy, Honeoy (organic); Blueberries, Bilberries, Bog whortleberries.

Kaempferol, Quercetin.

**67. Häkkinen, S. H., Kärenlampi, S. O., Heinonen, I. M., Mykkänen, H. M., and Törrönen, A. R.**

Content of flavonols quercetin, myricetin, and kaempferol in edible berries.

*J. Agric. Food Chem.*, 1999, 47, 2274-2279.

Currant (black, green, red, white), Gooseberry (yellow, red), Bog whortleberry, Lingonberry, Cranberry, Bilberry, Blueberry, Strawberry, Chokeberry, Rowanberry, Sweet Rowan, Raspberry (red) Cloudberry, Arctic bramble, Crowberry, Sea buckthorn berry.

Kaempferol, Myricetin, Quercetin.

**68. Harnly, J. M., Doherty, R., Beecher, G. R., Holden, J. M., Haytowitz, D. B., and Bhagwat, S.**

Flavonoid content of U.S. fruits, vegetables, and nuts.

*J. Agric. Food Chem.*, 2006 (Submitted).

Fruits: Apples Avocados, Bananas, Blackberries, Blueberries, Cantaloupe, Cherries (sweet), cranberries, Dates, Figs (Mission), Grapefruit (white and red), Honeydew melon, Kiwi (green and gold), Nectarines, Oranges (sweet and navel), Peaches, Pears (green), Pineapple (extra sweet), Plums (regular and diamond black), Prunes, Raisins, Raspberries, Strawberries, and watermelon.

Vegetables: Broccoli. Broccoli raab, Carrots, Celery, Lettuce (Butterhead, Green leaf, Iceberg, Red leaf, Romaine), Onions (yellow, sweet), Potatoes (red, russet, white), Radishes, Tomatoes.

Nuts: Almonds, Cashews, Hazelnuts, Macadamias, Pecans, Pine nuts, Pistachios, and walnuts.

Apigenin, Catechin, Catechin Gallate, Cyanidin, Delphinidin, Epicatechin, Epicatechin Gallate, Epigallocatechin, Epigallocatechin Gallate, Galocatechin, Galocatechin Gallate, Hesperetin, Luteolin, Malvidin, Myricetin, Naringenin, Pelargonidin, Peonidin, Petunidin, Quercetin.

- 69. Harnly, J. M., Doherty, R., Beecher, G. R., Holden, J. M., Haytowitz, D. B., and Bhagwat, S.**  
 Determination of 20 prominent flavonoids (as aglycones) in oranges (unpublished).  
 Oranges.  
 Apigenin, Catechin, Catechin Gallate, Cyanidin, Delphinidin, Epicatechin, Epicatechin Gallate, Epigallocatechin, Epigallocatechin Gallate, Gallocatechin, Gallocatechin Gallate, Hesperetin, Luteolin, Malvidin, Myricetin, Naringenin, Pelargonidin, Peonidin, Petunidin, Quercetin.
- 70. Hayashi, H., Hirako, N., Ikeshiro, Y., and Yamamoto, H.**  
 Organ specific localization of flavonoids in *Glycyrrhiza glabra* L.  
*Plant Sci.*, 1996, 116, 233-238.  
 Glycyrrhiza Glabra L. (Licorice).  
 Isoquercitrin.
- 71. Hempel, J., and Böhm, H.**  
 Quality and quantity of prevailing flavonoid glycosides of yellow and green french beans (*Phaseolus vulgaris* L.).  
*J. Agric. Food Chem.*, 1996, 44, 2114-2116.  
 French Beans - 6 green and 6 yellow varieties.  
 Kaempferol, Quercetin.
- 72. Herrera, M. C., and de Castro, M. D. L.**  
 Ultrasound-assisted extraction for the analysis of phenolic compounds in strawberries.  
*Anal. Bioanal. Chem.*, 2004, 379(78), 1106-1112.  
 Strawberries (red).  
 Catechin, Kaempferol, Naringin, Quercetin, Rutin
- 73. Hertog, M. G. L., Hollman, P. C. H., and van de Putte, B.**  
 Content of potentially anticarcinogenic flavonoids of tea infusions, wines, and fruit juices.  
*J. Agric. Food Chem.*, 1993, 41, 1242-1246.  
 Wine -red and white, Apple juice, Grape juice, Tomato juice, Grapefruit juice (fresh), Lemon juice (fresh), Orange juice (fresh), Orange juice (commercial composite), Beer (Heineken), Chocolate milk (semiskimmed), Coffee, Tea infusions (black, oolong, green).  
 Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin.
- 74. Hertog, M. G. L., Hollman, P. C. H., and Katan, M. B.**  
 Content of potentially anticarcinogenic flavonoids of 28 vegetables and fruits commonly consumed in The Netherlands.  
*J. Agric. Food Chem.*, 1992, 40, 2379-2383.  
 Mushroom - raw, canned, Onion, Leek, Beet -red, Turnip greens, Kale - raw, canned, Saurkraut, Cabbage - white, Cauliflower, Brussels sprout, Broccoli, Swedish turnip (Rutabaga), Cabbage - red- raw, frozen, Cabbage - green, Endive,

Chicory, Cucumber, Lettuce, French bean - raw, canned, Slicing bean, Pea - raw, canned, Purslane, Radish, Tomato, Spinach - raw, frozen, Broad bean - raw, canned, Pepper - red - sweet, Carrot - raw, canned, Strawberry, Apple (Granny Smith, James Grieve, golden delicious, Elstar, Jonagold, Cox's Orange), Applesauce, Currant - red, Apricot - raw, canned, Pear ( Conference, Beurré Hardy, Doyenne du Comice), Cherry - sweet - raw, canned, Plum, Peach - raw, canned, Grape - white, black.  
Apigenin, Kaempferol, Luteolin Myricetin, Quercetin.

- 75. Hertog, M. G. L., Hollman, P. C. H., and Venema, D. P.**  
Optimization of a quantitative HPLC determination of potentially anticarcinogenic flavonoids in vegetables and fruits.  
*J. Agric. Food Chem.*, 1992, 40, 1591-1598.  
Lettuce, Leek, Onion, Cranberry, Endive, Celery.  
Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin.
- 76. Howard, L. R., Talcott, S. T., Brenes, C. H., and Villalon, B.**  
Changes in phytochemical and antioxidant activity of selected pepper cultivars (Capsicum species) as influenced by maturity.  
*J. Agric. Food Chem.*, 2000, 48, 1713-1720.  
Peppers: bell (Yellow Bell), cascabella (PETO cascabella), long yellow (Inferno), cayenne (Mesilla), Tabasco (Tabasco), habanero (Francisca, Red Sanvina).  
Luteolin, Quercetin.
- 77. Inocencio, C., Rivera, D., Alcaraz, F., and Tomás-Barberán, F. A.**  
Flavonoid content of commercial capers (Capparis spinosa, C. sicula and C. orientalis) produced in Mediterranean countries.  
*Eur. Food Res. Technol.*, 2000, 212, 70-74.  
Capers (C. Sicula and C. orientalis).  
Kaempferol, Quercetin.
- 78. Iversen, C. K.**  
Black currant nectar: Effect of processing and storage on anthocyanin and ascorbic acid content.  
*J. Food Sci.*, 1999, 64(1), 37-41.  
Black currant (berries & nectar).  
Cyanidin glucosides, Delphinidin glucosides.
- 79. Jerumanis, J.**  
Quantitative analysis of flavonoids in barley, hops, and beer by high-performance liquid chromatography (HPLC).  
*J. Inst. Brew.*, 1985, 91, 250-252.  
Barley, Hops.  
Catechin.
- 80. Justesen, U., and Knuthsen, P.**

Composition of flavonoids in fresh herbs and calculation of flavonoid intake by use of herbs in traditional Danish dishes.

*Food Chem.*, 2001, 73, 245-250.

Basil, Chives, Coriander, Cress, Dill, Lemon balm, Lovage, Mint, Oregano, Parsley, Rosemary, Sage, Tarragon, Thyme, Watercress.

Apigenin, Hesperetin, Isorhamnetin, Kaempferol, Luteolin, Quercetin.

**81. Justesen, U., Knuthsen, P., and Leth, T.**

Quantitative analysis of flavonols, flavones, and flavonones in fruits, vegetables and beverages by high-performance liquid chromatography with photo-diode array and mass spectrometric detection.

*J. Chromatogr. A*, 1998, 799, 101-110.

Apple, Apricot, Bean - green, Currant - black, Blueberry, Broccoli, Brussels sprout, Celery - leaf, Celery - stalk, Cherry, Cowberry, Cranberry, Grapefruit - pulp, Grapes - blue, Grapes - green, Kale, Leek, Lemon -pulp, Onion -red, yellow , Onion-spring, Oran), Rosebud, Salads (Cabbage lettuce, China cabbage, Oxheart cabbage, Iceberg salad, Savoy), Strawberry, Peppe- green, sweet, Pepper - sweet red, Pepper - sweet - yellow, Tea, Tomato.

Apigenin, Hesperetin, Isorhamnetin, Kaempferol, Luteolin, Quercetin.

**82. Kaack, K., and Austed, T.**

Interaction of vitamin C and flavonoids in elderberry (*Sambucus nigra* L.) during juice processing.

*Plant Foods Hum. Nutr.*, 1998, 52, 187-19.

Elderberry - 13 cultivars.

Cyanidin glucosides, Quercetin.

**83. Kahkonen, M.P., Heinamaki, J., Ollilainen, V., and Heinonen, M.**

Berry anthocyanins: Isolation, identification, and antioxidant activities.

*J. Sci. Food Agric.*, 2003, 83, 1403-1411.

Blackcurrant, Bilberry, Cowberry.

Cyanidin conjugates, Delphinidin conjugates, Malvidin conjugates, Peonidin conjugates, Petunidin conjugates.

**84. Kallithraka, S., Mohdaly, A. A-A., Makris, D., and Kefalas, P.**

Determination of major anthocyanin pigments in Hellenic native grape varieties (*Vitis vinifera* sp.): association with antiradical activity.

*J. Food Comp. Anal.*, 2005, 18(5), 375-386.

Grapes (Xinomavro, Mandilaria, Thrapsa, Aidani Mavro, Sangivese, Pardala, Papadiko, Mavrodafni, Liatiko, Grenache Rouge, Karlachanas, Merlot, Limnio, Araklinos, Negoska, Vapsa, Cabernet Sauvignon).

Cyanidin, Delphinidin, Malvidin, Petunidin, Peonidin.

**85. Khokhar, S. and Magnusdottir, S.G.M.**

Total phenol, catechin, and caffeine contents of teas commonly consumed in the United Kingdom.



- J. Agric. Food Chem.*, 2002, 50, 565-570.  
Black Tea (12 brands), Green Tea (6 types), & Fruit Tea (strawberry, lemon, cherry, forest fruit, blackcurrant, & orange).  
Catechin, Epicatechin, Epicatechin-3-gallate, Epigallocatechin, Epigallocatechin-3-gallate.
- 86. Khokhar, S., Venema, D., Hollman, P. C. H., Dekker, M., and Jongen, W.**  
A RP-HPLC method for the determination of tea catechins.  
*Cancer Letters*, 1997, 114, 171-172.  
Black tea (Ceylon, Yule, & PG-Tips), Green tea (China, Japan), and Oolong tea (China).  
Catechin, Epicatechin, Epicatechin-3-gallate, Epigallocatechin, Epigallocatechin-3-gallate.
- 87. Kosar, M., Kafkas, E., Paydas, S., and Base, H. C.**  
Phenolic composition of strawberry genotype at different maturation stages.  
*J. Agric. Food. Chem.*, 2004, 52, 1586-1589.  
Strawberries (Camarosa, Dorit, Chandler, Osmanali).  
Cyanidin, Pelargonidin, P-OH-benzoic acid, P-coumaric acid, Ellagic acid, Kaempferol, Myricetin, Quercetin.
- 88. Kreft, S., Knapp, M., and Kreft, I.**  
Extraction of rutin from buckwheat (*Fagopyrum esculentum* Moench) seeds and determination by capillary electrophoresis.  
*J. Agric. Food Chem.*, 47, 1999, 4649-4652.  
Buckwheat.  
Rutin.
- 89. Kuhr, S., and Engelhardt, U. H.**  
Determination of flavonols, theogallin, gallic acid and caffeine in tea using HPLC.  
*Z Lebensm Unters Forsch*, 1991, 192, 526-529.  
Black teas, Green teas, Oolong teas.  
Catechin, Epicatechin, Epicatechin-gallate, Epigallocatechin, Epigallocatechin-gallate.
- 90. Kuti, J. O.**  
Antioxidant compounds from four *Opuntia* cactus pear fruit varieties.  
*Food Chemistry*, 2004, 85, 527-533.  
Cactus Pear, *Opuntia* species (*O. ficus-indica*, *O. lindheimeri*, *O. streptocantha*, *O. stricta* v. *stricta*).  
Isorhamnetin, Kaempferol, Quercetin.
- 91. Kuti, J. O., Konuru, H. B.**  
Antioxidant capacity and phenolic content in leaf extracts of tree spinach (*Cnidioscolus* spp.).  
*J. Agric. Food Chem.*, 2004, 52, 117-121.

Tree Spinach (*Cnidioscolus aconitifolius*, *C. chayamansa*).  
Kaempferol, Quercetin.

- 92. Lamuela-Raventós, R. M., Andrés-Lacueva, Permanyer, J., and Izquierdo-Pulido, M.**  
More antioxidants in cocoa.  
*J. Nutr.*, 2001, 131, 834.  
Cocoa.  
Quercetin.
- 93. Lattanzio, V., and van Sumere, C. F.**  
Changes in phenolic compounds during the development and cold storage of artichoke (*Cynara scolymus* L.) heads.  
*Food Chem.*, 1987, 24, 37-50.  
Artichoke (cv. Catanese).  
Apigenin, Luteolin.
- 94. Lee, K. W., Kim, Y. J., Kim, D-O., Lee, H. J., and Lee, C. Y.**  
Major phenolics in apple and their contribution to the total antioxidant capacity.  
*J. Agric. Food Chem.*, 51, 2003, 6516-6520.  
Apples (Golden Delicious, Cortland, Monroe, Rhode Island Greening, Empire, NY674).  
Epicatechin, Quercetin.
- 95. Lee, J., Durst, R. W., and Wrolstad, R. E.**  
Impact of juice processing on blueberry anthocyanins and polyphenolics: comparison of two pretreatments.  
*J. Food Sci.*, 2002, 67(5), 1660-1667.  
Blueberries (highbush, *Vaccinium corymbosum* L. cv. Rubel).  
Cyanidin-glycosides, Delphinidin-glycosides, Malvinidin-glycosides, Peonidin-glycosides, Petunidin-glycosides.
- 96. Lee, B-L., and Ong, C-N.**  
Comparative analysis of tea catechins and theaflavins by high-performance liquid chromatography and capillary electrophoresis.  
*J. Chromatogr. A.*, 2000, 881, 439-447.  
Tea - dry leaves (Japanese green, Long-jing green, Jasmine green, Chrysanthemum - dried flower, Pu-erh black, Iron Buddha - Oolong, Oolong, Ceylon black).  
Epicatechin, Epicatechin-gallate, Epigallocatechin. Epigallocatechin gallate, Theaflavin.
- 97. Lee, Y., Howard, L. R., and Villalón, B.**  
Flavonoids and antioxidant activity of fresh pepper (*Capsicum annum*) cultivars.  
*J. Food Sci.*, 1995, 60, 473-476.  
Pepper - Jalapeno (Veracruz, Mitla, Tam mild, Jaloro, Sweet Jalapeno), Pepper - yellow - wax (Hungarian yellow, Long hot yellow, Gold spike -hybrid), Pepper -

Chile (New Mexico-6, Green chile), Pepper - Ancho, Pepper - Serrano Hidalgo).  
Luteolin, Quercetin.

- 98. Lin J-K., Lin, C-L., Liang, Y-C., Lin-Shiau, S-Y., and Juan, I-M.**  
Survey of catechins, gallic acid, and methylxanthines in green, oolong, pu-erh, and black teas.  
*J. Agric. Food Chem.*, 1998, 46, 3635-3642.  
Black tea, Green Tea, Oolong tea, Pu-erh tea.  
Catechin, Epicatechin, Epicatechin-gallate, Epigallocatechin, Epigallocatechin-gallate, Gallocatechin-gallate.
- 99. Lombard, K., Peffley, E., Geoffriau, E., Thompson, L., and Herring, A.**  
Quercetin in onion (*Allium cepa L.*) after heat-treatment simulating home preparation.  
*J. Food Comp. Anal.*, 2005, 18, 571-581.  
Onions yellow (Tamara, Predator, Rio Rita, RNX 10968), Red variety.  
Quercetin.
- 100. Lombardi-Boccia, G., Lucarini, M., Lanzi, S., Agizzi, A., and Cappelloni, M.**  
Nutrients and antioxidant molecules in yellow plums (*Prunus domestica L.*) from conventional and organic productions: a comparative study.  
*J. Agric. Food Chem.*, 2004, 52, 90-94.  
Plums, yellow.  
Kaempferol, Myricetin, Quercetin.
- 101. Lopez, M., Martinez, F., Del Valle, C., Orte, C., and Miro, M.**  
Analysis of phenolic constituents of biological interest in red wines by high-performance liquid chromatography.  
*J. Chromat. A.*, 2001, 922, 359-363.  
Red wine.  
Quercetin, Rutin.
- 102. Lugasi, A. and Hovari, J.**  
Flavonoid aglycons in foods of plant origin II. Fresh and dried fruits.  
*Acta Alimentaria*, 2002, 31(1), 63-71.  
Plum (Redskin & Besztercei), Peach, Apricot, Greengage (white skin, red skin), Walnut, Sweet cherry, Sour cherry, Blackberry, Raspberry, Strawberry, Black currant, Red currant, Gooseberry (green, red), Mulberry, Grape (Cardinal, Chasselas, Othello), Apple (Gala, Golden, Jonathan), Pomegranate, Pear, Quince-apple, Watermelon, Muskmelon, Pumpkin, Lemon, Grapefruit, Tangerine, Orange, Kiwi, Banana.  
Luteolin, Myricetin, Quercetin.
- 103. Lugasi, A., and Hovari, J.**  
Flavonoid aglycons in foods of plant origin I. Vegetables.  
*Acta Alimentaria*, 2000, 29, 345-352.

Lettuce (generic, crisped, ice), Spinach, Parsley leaves, Celery leaves, Dill, Radish (purple, black), Horse radish, Red beet, Carrot, Parsnip, Celery root, Swedish turnip, Cauliflower, Broccoli, Kohlrabi, Brussels sprouts, Kale, Chinese cabbage, White cabbage, Red cabbage, Onions (old, young, red), Leek, Sweet pepper, Californian pepper, Tomato, Cucumber.  
Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin.

**104. Luo, X.-D., Basile, M. J., and Kennelly, E. J.**

Polyphenolic antioxidants from the fruits of *Chrysophyllum cainito* L. (Star Apple).  
*J. Agric. Food Chem.*, 2002, 50(6), 1379-1382.

Star apple.

Catechin, Epicatechin, Epigallocatechin, Gallocatechin, Isoquercitrin, Myricitrin, Quercetin, Quercitrin.

**105. Maatta, K. R., Kamal-Eldin, A., and Torronen, A. R.**

High-Performance liquid chromatography (HPLC) analysis of phenolic compounds in berries with diode array and electrospray ionization mass spectrometric (MS) detection: *Ribes* species.

*J. Agric. Food Chem.*, 2003, 51, 6736-6744.

Currants (black, green, red and white).

Cyanidin, Delphinidin, Kaempferol, Myricetin, Quercetin.

**106. Makris, D. P. and Rossiter, J. T.**

Domestic processing of onion bulbs (*Allium cepa*) and asparagus spears (*Asparagus officinalis*): Effect on flavonol content and antioxidant status.

*J. Agric. Food Chem.*, 2001, 49(7), 3216-3222.

Onion bulbs, raw and boiled, Asparagus, raw and boiled.

Quercetin, Rutin.

**107. Marin, F. R., Martinez, M., Uribealgo, T., Castillo, S., and Frutos, M. J.**

Changes in nutraceutical composition of lemon juices according to different industrial extraction systems.

*Food Chem.*, 2002, 78(3), 319-324.

Lemon juice (Fino & Verna varieties).

Eriocitrin, Hesperidin, Luteolin-7-O-rutinoside.

**108. Marini, D., and Balestrieri, F.**

Multivariate analysis of flavanone glycosides in citrus juices.

*Ital. J. Food sci.*, 1995, 3, 255-264.

Orange juice.

Hesperidin, Narirutin, Neoeriocitrin, Neohesperidin, Naringin.

**109. Marotti, M. and Piccaglia, R.**

Characterization of flavonoids in different cultivars of onion (*Allium cepa* L.).

*J. Food Sci.*, 2002, 67(3), 1229-1232.

Onion (12 cultivars).

Isorhamnetin, Isorhamnetin monoglycoside, Quercetin glycosides, Rutin.

- 110. Mattila, P., Astola, J., and Kumpulainen, J.**  
Determination of flavonoids in plant material by HPLC with diode-array and electro-array detection.  
*J. Agric. Food Chem.*, 2000, 48, 5834-5841.  
Lingonberry, Cranberry, Red onion, Yellow onion, Broccoli, Green tea, Black tea, red wine, Apple, Lemon, Orange, Parsley.  
Apigenin, Catechin, Epicatechin, Epicatechin gallate, Epigallocatechin gallate, Eriodictyol, Hesperetin, Isorhamnetin, Kaempfero, Luteolin, Myricetin, Naringenin, Quercetin.
- 111. McMurrough, I. and Madigan, D.**  
Semipreparative chromatographic procedure for the isolation of dimeric and trimeric proanthocyanidins from barley.  
*J. Agric. Food Chem.*, 1996, 44(7), 1731-1735.  
Beer.  
Catechin, Epicatechin.
- 112. Milbury, P. E., Chen, C-Y., and Blumberg, J. B.**  
Flavonoid content of almond varieties.  
Unpublished data provided by Antioxidant Research Laboratory, Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University.  
Almonds (varieties: Carmel, Butte, Padre, Fritz, Mission, Monterey, Nonpareil, and Price).  
Catechin, Epicatechin, Eriodictyol, Isorhamnetin and glycosides, Kaempferol and glycosides, Naringenin and glycosides, Quercetin and glycosides, Rutin.
- 113. Mouly, P. P., Gaydou, E. M., Faure, R., and Estienne, J. M.**  
Blood orange juice authentication using cinnamic acid derivatives. Variety differentiations associated with flavanone glycoside content.  
*J. Agric. Food Chem.*, 1997, 45, 373-377.  
Blood orange juice (Washington sanguine, Malta, Sanguineli, Moro).  
Hesperidin, Narirutin.
- 114. Mouly, P. P., Arzouyan, C. R., Gaydou, E. M., and Estienne, J. M.**  
Differentiation of citrus juices by factorial discriminant analysis using liquid chromatography of flavanone glycosides.  
*J. Agric. Food Chem.*, 1994, 42, 70-79.  
Lemon juice, Lime juice, Grapefruit juice (white, pink, red, green), Orange juice (Valencia, Navel, Blood, Thompson, Malta).  
Eroicitrin, Hesperidin, Naringin, Narirutin, Neeroicitrin, Neohesperidin.
- 115. Mouly, P., Gaydou, E. M., and Estienne, J.**  
Column liquid chromatographic determination of flavanone glycosides in Citrus.  
*J. Chromatogr.*, 1993, 634, 129-134.

Grapefruit juice, Sour orange juice.  
Eriocitrin, Hesperidin, Naringin, Narirutin, Neohesperidin, Neohesperidin.

- 116. Mullen, W., Stewart, A. J., Lean, M. E. J., Gardner, P., Duthie, G. G., and Crozier, A.**  
Effect of freezing and storage on the phenolics, ellagitannins, flavonoids, and antioxidant capacity of red raspberries.  
*J. Agric. Food Chem.*, 2002, 50, 5197-5201.  
Raspberries.  
Cyanidin, Kaempferol, Pelargonidin, Quercetin.
- 117. Nicolle, C., Carnat, A., Fraisse, D., Lamison, J-L., Rock, E., Michel, H., Amouroux, P., and Remesy, C.**  
Characterization and variation of antioxidant micronutrients in lettuce (*Lactuca sativa folium*).  
*J. Sci. Food Agric.*, 2004, 84, 2061-2069.  
Lettuce: butter, Batavia, oak leaf (green and red).  
Quercetin.
- 118. Nogata, Y., Ohta, H., Yoza, K-I., Berhow, M., and Hasegawa, S.**  
High-performance liquid chromatographic determination of naturally occurring flavonoids in citrus with a photodiode-array detector.  
*J. Chromatogr. A*, 1994, 667, 59-66.  
Pummelo juice, Mandarin juice.  
Eriocitrin, Neohesperidin, Narirutin, Naringin, Rutin, Hesperidin, Neohesperidin, Apigenin, Kaempferol, Luteolin.
- 119. Nuutila, A. M., Kammiovirta, K., and Oksman-Caldentey, K.-M.**  
Comparison of methods for the hydrolysis of flavonoids and phenolic acids from onion and spinach for HPLC analysis.  
*Food Chem.*, 2002, 76(4), 519-525.  
Red onion, Spring onion (red)-bulb, Spinach.  
Kaempferol, Quercetin.
- 120. Ollanketo, M., and Riekkola, M-L.**  
Column-switching technique for selective determination of flavonoids in Finnish berry wines by high-performance liquid chromatography with diode array detection.  
*J. Liq. Chrom. & Rel. Technol.*, 2000, 23, 1339-1351.  
Wines - Black currant, Blueberry, Crowberry.  
Isoquercitrin, Kaempferol, Myricetin, Quercetin, Rutin.
- 121. Ooghe, W. C., and Detavernier, C. M.**  
Detection of the addition of citrus reticulata and hybrids to citrus sinensis by flavonoids.  
*J. Agric. Food Chem.*, 1997, 45, 1633-1637.  
Orange juice, Tangerine juice, Temple juice, Mandarin juice, Murcott juice, Cravo

juice (hybrid), Kinno juice (hybrid).  
Hesperidin, Narirutin.

- 122. Oomah, D. B., and Mazza, G.**  
Flavonoids and antioxidative activities in buckwheat.  
*J. Agric. Food Chem.*, 1996, 44, 1746-1750.  
Buckwheat.  
Rutin.
- 123. Oszmianski, J., and Lee, C. Y.**  
Isolation and HPLC determination of phenolic compounds in red grapes.  
*Am. J. Enol. Vitic.*, 1990, 41, 204-206.  
Grapes - red (Concord, Chaunac).  
Epicatechin, Quercetin glucosides, Rutin.
- 124. Palimino, O., Gómez-Serranillos, M. P., Carretero, S. E., and Villar, A.**  
Study of polyphenols in grape berries by reversed-phase high-performance liquid chromatography.  
*J. Chromatogr. A*, 2000, 870, 449-451.  
Grape.  
Quercetin, Quercitrin, Rutin.
- 125. Papagiannopoulos, M., Wollseifen, H. R., Mellenthin, A., Haber, B., and Galensa, R.**  
Identification and quantification of polyphenols in carob fruits (*Ceratonia siliqua* L.) and derived products by HPLC-UV-ESI/MS<sup>n</sup>.  
*J. Agric. Food Chem.*, 2004, 52, 3784-3791.  
Carob fiber, Carob flour, Kibbles syrup.  
Kaempferol, Myricetin, Quercetin.
- 126. Patil, B. S., Pike, L. M., and Hamilton, B. K.**  
Changes in quercetin concentration in onion (*Allium cepa* L.) owing to location, growth stage and soil type.  
*New Phytol.*, 1995, 130, 340-355.  
Onion - yellow.  
Quercetin.
- 127. Patil, B. S., Pike, L. M., and Yoo, K. S.**  
Variation in the quercetin content in different colored onions (*Allium cepa* L.).  
*J. Amer. Soc. Hort. Sci.*, 1995, 120, 909-913.  
Onion- red (6 cultivars), pink (3 cultivars), yellow (45 cultivars), Vidalia (10 cultivars), white (11 cultivars).  
Quercetin.
- 128. Price, K. R., Prosser, T., Richetin, A. M. F., and Rhodes, M. J. C.**  
A comparison of the flavonol content and composition of dessert, cooking and

cider-making apples; distribution within the fruit and effect of juicing.  
*Food Chem.*, 66, 1999, 489-494.

Apples with skin. Eating apples - Egremont, Cox's Orange, Granny Smith, Jonagored; Cooking apples - Bramley; Cider apples - Dabinett, Michelin, Yarlington.  
Quercetin.

**129. Price, K. R., Casuscelli, F., Colquhoun, I. J., and Rhodes, M. J. C.**

Composition and content of flavonol glycosides in broccoli florets (*Brassica oleracea*) and their fate during cooking.

*J. Sci. Food Agric.*, 1998, 77, 468-472.

Broccoli - raw, cooked.

Isoquercitrin, Kaempferol, Quercetin.

**130. Price, K. R., Colquhoun, I. J., Barnes, K. A., and Rhodes, M. J. C.**

Composition and content of flavonol glycosides in green beans and their fate during processing.

*J. Agric. Food Chem.*, 1998, 46, 4898-4903.

Green beans - raw, canned.

Kaempferol, Quercetin.

**131. Price, K. R., Rhodes, M. J. C., and Barnes, K. A.**

Flavonol glycoside content and composition of tea infusions made from commercially available teas and tea products.

*J. Agric. Food Chem.*, 1998, 46, 2517-2522.

Black teas, Tea products.

Kaempferol glycosides, Quercetin glycosides.

**132. Price, K. R., and Rhodes, M. J. C.**

Analysis of the major flavonol glycosides present in four varieties of onion (*Allium cepa*) and changes in composition resulting from autolysis.

*J. Sci. Food Agric.*, 1997, 74, 331-339.

Onion - Red Barron - red, Rijnsburger - brown, Rose - pink, Albion - white.

Quercetin.

**133. Price, K. R., Bacon, J. R., and Rhodes, M. J. C.**

Effect of storage and domestic processing on the content and composition of flavonol glucosides in onion (*Allium cepa*).

*J. Agric. Food Chem.*, 1997, 45, 938-942.

Onion - brown, red.

Quercetin.

**134. Price, W. E. And Spitzer, J. C.**

Variations in the amount of individual flavanols in a range of green teas.

*Food Chem.*, 1993, 47, 271-276.



Green teas.

Epicatechin, Epicatechin gallate, Epigallocatecin, Epigallocatechin gallate.

- 135. Proteggente, A. R., Saija, A., De Pasquale, A., and Rice-Evans, C. A.**  
The compositional characterisation and antioxidant activity of fresh juices from Sicilian sweet orange (*Citrus sinensis* L. Osbeck) varieties.  
*Free Rad. Res.*, 2003, 37(6), 681-687.  
Orange juice (Varieties: Navel, Valencia, Ovale, Sanguinello, Moro, Tarocco).  
Cyanidin glucosides, Hesperidin, Narirutin.
- 136. Pupin A. M., Dennis, M. J., and Toledo, M. C. F.**  
Flavanone glycosides in Brazilian orange juice.  
*Food Chem.*, 1998, 61, 275-280.  
Orange juice (Brazilian).  
Hesperidin, Narirutin.
- 137. Puupponen-Pimia, R., Häkkinen, S. T., Aarni, M., Suortti, T., Lampi, A-M., Euroala, M., Piironen, V., Nuutila, A. M., and Oksman-Caldentey, K-M.**  
Blanching and long-term freezing affect various bioactive compounds of vegetables in different ways.  
*J. Sci. Food Agric.*, 2003, 83, 1389-1402.  
Peas (fresh, processed), Carrots, Cauliflower, Cabbage, Spinach, Potatoes, Swede.  
Kaempferol, Quercetin.
- 138. Pyo, Y-H., Lee, T-C., Logendra, L., and Rosen, R. T.**  
Antioxidant activity and phenolic compounds of Swiss chard (*Beta vulgaris* subspecies *cykla*) extracts.  
*Food Chemistry*, 2004, 85, 19-26.  
Swiss chard (red tissue, white tissue).  
Catechin, Kaempferol, Myricetin, Quercetin.
- 139. Quettier-Eleu, C., Gressier, B., Vasseur, J., Dine, T., Brunet, C., Luyckx, M., Cazin M., Cazin, J-C., Bailleul, F., and Trotin, F.**  
Phenolic compounds and antioxidant activities of buckwheat (*Fagopyrum esculentum* Moench) hulls and flour.  
*J. Ethnopharmacol.*, 2000, 72, 35-42.  
Buckwheat - hull, flour.  
Epicatechin, Rutin.
- 140. Raffo, A., Leonardi, C., Fogliano, V., Ambrosino, P., Salucci, M., Gennaro, L., Buglianesi, R., Giuffrida, F., and Quaglia, G.**  
Nutritional value of cherry tomatoes (*Lycopersicon esculentum* Cv. Naomi F1) harvested at different ripening stages.  
*J. Agric. Food Chem.*, 2002, 50(22), 6550-6556.  
Cherry tomato (cv Naomi).  
Naringenin, Quercetin, Rutin.

- 141. Rechner, A. R., Wagner, E., Van Buren, L., Van de Put, F., Wiseman, S., and Rice-Evans, C. A.**  
Black tea represents a major source of dietary phenolics among regular tea drinkers.  
*Free Radic. Res.*, 2002, 36(10), 1127-1135.  
Black tea (7 brands).  
Epicatechin, Epicatechin gallate, Epigallocatechin, Epigallocatechin gallate, Kaempferol glucosides, Quercetin glucosides, Theaflavins (1-4), Thearubigins.
- 142. Řehová, L., Škeřiková, V., and Jandera, P.**  
Optimisation of gradient HPLC analysis of phenolic compounds and flavonoids in beer using a CoulArray detector.  
*J. Sep. Sci.*, 2004, 27, 1345-1359.  
Czech Beer (Platan 11, light lager), German beer (Lowenbrau premium).  
Catechin, Epicatechin, Rutin.
- 143. Revilla, E., Ryan, J-M., and Martin-Ortega, G.**  
Comparison of several procedures used for the extraction of anthocyanins from red grapes.  
*J. Agric. Food Chem.*, 1998, 46(11), 4592-4597.  
Red grapes (Cabernet Sauvignon).  
Cyanidin, Delphinidin, Malvidin, Peonidin, Petunidin.
- 144. Revilla, E.**  
Analysis of flavonol aglycones in wine extracts by high performance liquid chromatography.  
*Chromatographia*, 1986, 22, 1-6.  
Wine - red, white, Sherry.  
Isorhamnetin, Kaempferol, Myricetin, Quercetin.
- 145. Rodríguez-Delgado, M.-A., Gonzalez-Hernandez, G., Conde-Gonzalez, J.-E., and Perez-Trujillo, J.-P.**  
Principal component analysis of the polyphenol content in young red wines.  
*Food Chem.*, 2002, 78(4), 523-532.  
Red wine.  
Catechin, Epicatechin, Kaempferol, Myricetin, Quercetin, Quercitrin.
- 146. Rodríguez-Delgado, M. A., Malovaná, S., Pérez, J. P., and Borges, T.**  
Separation of phenolic compounds by high-performance liquid chromatography with absorbance and fluorimetric detection.  
*J. Chromatogr. A*, 2001, 912, 249-257.  
Red wine, White wine.  
Catechin, Epicatechin, Myricetin, Kaempferol, Quercetin.
- 147. Rodríguez-Delgado, M. A., Pérez, M. L., Corbella, R., González, G., García Montelongo, F. J.**

Optimization of the separation of phenolic compounds by micellar electokinetic capillary chromatography.

*J. Chromatogr. A*, 2000, 871, 427-438.

Wines - Spanish.

Catechin, epicatechin, Kaempferol, Myricetin, Quercetin, Rutin.

**148. Romani, A., Vignolini, P., Galardi, C., Mulinacci, N., Benedettelli, S., and Heimler, D.**

Germplasm characterization of Zolfino Landraces (*Phaseolus vulgaris* L.) by flavonoid content.

*J. Agric. Food Chem.*, 2004, 52, 3838-3842.

Zolfino Landraces (Tuscan legume).

Delphinidin, Kaempferol, Malvidin, Petunidin, Quercetin.

**149. Rouseff, R. L.**

Liquid chromatographic determination of naringin and neohesperidin as a detector of grapefruit juice in orange juice.

*J. Assoc. Off. Anal. Chem.*, 1988, 71, 798-802.

Orange juice, Grapefruit juice.

Naringin, Neohesperidin.

**150. Rouseff, R. L., Barros, S. M., Dougherty, M. H., and Martin, S. F.**

A survey of quality factors found in Florida canned single-strength grapefruit juice from the 1977-78, 1978-79, and 1979-80 seasons.

*Proc. Fla. State Hort. Soc.*, 1980, 93, 286-289.

Grapefruit juice (canned).

Naringin.

**151. Sakakibara, H., Honda, Y., Nakagawa, S., Ashida, H., and Kanazawa, K.**

Simultaneous determination of all polyphenols in vegetables, fruits, and teas.

*J. Agric. Food Chem.*, 2003, 51 (3), 571-581.

Taro, Cabbage, Celery, Coriander, radish leaves, Turnip leaves, Broccoli, Cacao, Tomato, Black soybean, Carob, Peas (garden), Kumquat, Orange, Sweet cherries, Green tea (dry), Oolong tea (dry), Black tea (dry).

Apigenin, Catechin, Epicatechin, Isorhamnetin, Kaempferol, Luteolin, Quercetin, Theaflavin, Theaflavin gallates.

**152. Sampson, L., Rimm, E., Hollman, P. C. H., de Vries, J. H. M., and Katan, M. B.**

Flavonol and flavone intakes in US health professionals.

*J. Am. Diet. Assoc.*, 2002, 102(10), 1414-1420.

Apples (Delicious, Granny Smith, Macintosh), Avocado, Cantaloupe, Watermelon, Alfalfa sprouts, Onions-Spanish (white, yellow), Pepper (green), Apple juice (Motts, Storebrand, Veryfine), Tea (Lipton, Salada, Tetley), Red wine (Cabernet Sauvignon, Merlot, Syrah).

Kaempferol, Myricetin, Quercetin.

- 153. Sanchez-Moreno, C., Plaza, L., de Ancos, B., and Cano., M. P.**  
Quantitative bioactive compounds assessment and their relative contribution to the antioxidant capacity of commercial orange juices.  
*J. Sci. Food Agric.*, 2003, 83(5), 430-439.  
Orange juice.  
Hesperetin, Naringenin.
- 154. Sanchez-Moreno, C., Plaza, L., de Ancos, B., and Cano., M. P.**  
Effect of high-pressure processing on health-promoting attributes of freshly squeezed orange juice (*Citrus sinensis* L.) during chilled storage.  
*Eur. Food Res. Technol.*, 2003, 216, 18-22.  
Orange juice (freshly squeezed, variety Valencia late).  
Hesperetin, Naringenin.
- 155. Sanchez-Moreno, C., Cao, G., Ou, B., and Prior, R. L.**  
Anthocyanin and proanthocyanin content in selected white and red wines. Oxygen radical absorbance capacity comparison with nontraditional wines obtained from highbush blueberry.  
*J. Agric. Food Chem.*, 2003, 51, 4889-486.  
Red wines.  
Catechin, Cyanidin, Delphinidin, Malvidin, Peonidin, Petunidin.
- 156. Schieber, A., Keller, P., Carle, R.**  
Determination of phenolic acids and flavonoids of apple and pear by high-performance liquid chromatography.  
*J. Chromatogr. A*, 2001, 910, 265-273.  
Apple juice, Pear.  
Catechin, Epicatechin, Quercetin.
- 157. Schutz, K., Kammerer, D., Carle, R., and Schieber, A.**  
Identification and quantification of caffeoylquinic acids and flavonoids from artichoke (*Cynara scolymus* L.) heads, juice and pomace by HPLC-DAD-ESI/MS<sup>n</sup>.  
*J. Agric. Food Chem.*, 2004, 52, 4090-4096.  
Artichoke heads, juice and pomace.  
Apigenin, Luteolin, Naringenin.
- 158. Sellappan, S., Akoh, C.C., and Krewer, G.**  
Phenolic compounds and antioxidant capacity of Georgia-grown blueberries and blackberries.  
*J. Agric. Food Chem.*, 2002, 50(8), 2432-2438.  
Blueberries (Rabbiteye & Southern highbush), Blackberries.  
Catechin, Epicatechin, Kaempferol, Myricetin, Quercetin.
- 159. Sellappan, S. and Akoh, C.**  
Flavonoids and antioxidant capacity of Georgia-grown Vidalia onions.

*J. Agric. Food Chem.*, 2002, 50, 5338-5342.

Onions (*Vidalia*).

Kaempferol, Myricetin, Quercetin.

**160. Shao, W. Powell, C., and Clifford, M. N.**

The analysis by HPLC of green, black and pu'er teas produced in Yunnan.

*J. Sci. Food Agric.*, 1995, 69, 535-540.

Black tea, Green tea, Pu'er tea.

Catechin, Epicatechin, Epicatechin-gallate, Epigallocatechin, Epigallocatechin-gallate, Theaflavin, Theaflavin-3-gallate, Theaflavin-3'-gallate, Theaflavin-3-3'-gallate, Thearubigins.

**161. Simonetti, P., Piétta, P., and Testolin, G.**

Polyphenol content and total antioxidant potential of selected Italian wines.

*J. Agric. Food Chem.*, 1997, 45, 1152-1155.

Wines - red, white.

Isorhamnetin, Kaempferol, Myricetin, Quercetin, Rutin.

**162. Skegret, M. Kotnik, P., Hadolin, M., Hras, A. R., Simonic, M., and Knez, Z.**

Phenols, proanthocyanidins, flavones, and flavonols in some plant materials and their antioxidant activities.

*Food Chemistry*, 2005, 89, 191-198.

Laurel, Oregano, Olive tree, Hypericum, Hawthorn.

Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin,

**163. Slimestad, R., Toskangerpoll, K., Nateland, H. S., Johannessen, T., and Giske, N. H.**

Flavonoids from black chokeberries, *Aronia melanocarpa*.

*J. Food Comp. Anal.*, 2005, 18, 61-68.

Chokeberries (black).

Cyanidin, Eriodictyol, Quercetin.

**164. Spanos, G. A. and Wrolstad, R. E.**

Influence of processing and storage on the phenolic composition of Thompson seedless grape juice.

*J. Agric. Food Chem.*, 1990(a), 38(7), 1565-1571.

Grape juice (from Thompson seedless grapes).

Catechin, Epicatechin.

**165 Spanos, G.A., Wrolstad, R.E., and Heatherbell, D.A.**

Influence of processing and storage on the phenolic composition of apple juice.

*J. Agric. Food Chem.*, 1990(b), 38(7), 1572-1579.

Apple juice (from Granny Smith, Red delicious, McIntosh, & Spartan variety).

Catechin, Epicatechin, Quercetin glycoside.

- 166. Steadman, K. J., Burgoon, M. S., Lewis, B. A., Edwardson, S., and Obendorf, R. L.**  
 Minerals, phytic acid, tannin and rutin in buckwheat seed milling fractions.  
*J. Sci. Food Agric.*, 2001, 81, 1094-1100.  
 Buckwheat groats, Buckwheat flour.  
 Quercetin, Rutin.
- 167. Steinhaus, B., and Engelhardt, U. H.**  
 Theaflavins in black tea.  
*Z Lebensm Unters Forsch*, 1989, 188, 509-511.  
 Black tea.  
 Theaflavin, Theaflavin-3-gallate, Theaflavin-3'-gallate, Theaflavin-3-3'-gallate.
- 168. Stewart, A. J., Bozonnet, S., Mullen, W., Jenkins, G., Lean, M. E. J., and Crozier, A.**  
 Occurrence of flavonols in tomatoes and tomato-based products.  
*J. Agric. Food Chem.*, 2000, 48, 2663-2669.  
 Tomatoes - Spanish, Israeli, South African, English, Scottish -Beefsteak, Cherry, Yellow.  
 Kaempferol, Quercetin.
- 169. Suárez, B., Picinelli, A., Mangas, J. J.**  
 Solid-phase extraction and high-performance liquid chromatographic determination of polyphenols in apple musts and ciders.  
*J. Chromatogr. A*, 1996, 727, 203-209.  
 Apple - must, cider.  
 Epicatechin, Quercetin.
- 170. Teissedre, P-L., and Landrault, N.**  
 Wine phenolics: contribution to dietary intake and bioavailability.  
*Food Res. Int.*, 2000, 33, 461-467.  
 Wines - red, white.  
 Catechin, Epicatechin, Malvidin.
- 171. Tokusoglu, O. and Unal, M. K.**  
 Optimized method for simultaneous determination of catechin, gallic acid, and methylxanthine compounds in chocolate using RP-HPLC.  
*Eur. Food Res. Technol.*, 2002, 215, 340-346.  
 Milk chocolate (Ulker Lux, Ulker Balmond, Milka, Alpella, Nestle Damak, Nestle Crunch, Nestle Nesquik, Toblerone, Bounty), Dark chocolate (Ulker Bitter Lux, Nestle Classic Bitter-dark sweet).  
 Catechin, Epicatechin, Epicatechin gallate, Epigallocatechin, Epigallocatechin gallate.
- 172. Tomás-Barberán, F. A., Gil, M. I., Cremin, P., Waterhouse, A. L., Hess-Pierce, B., and Kader, A. A.**

HPLC-DAD-ESIMS analysis of phenolic compounds in nectarines, peaches, and plums.

*J. Agric. Food Chem.*, 2001, 49, 4748-4760.

Nectarines (white & yellow flesh), Peaches (white & yellow flesh), Plums (red & yellow).

Catechin, Cyanidin glycosides, Epicatechin, Quercetin glycosides.

- 173. Tomás-Lorente, F., García-Viguera, C., Ferreres, F., and Tomás-Barberán, F.**  
Phenolic compounds analysis in the determination of fruit jam genuineness.

*J. Agric. Food Chem.*, 1992, 40, 1800-1804.

Jams - Apricot, Peach, Plum, Strawberry, Sour Orange.

Kaempferol, Naringin, Neohesperidin, Quercetin, Rutin.

- 174. Toyoda, M., Tanaka, K., Hoshino, K., Akiyama, H., Tanimura, A., and Saito, Y.**

Profiles of potentially antiallergic flavonoids in 27 kinds of health tea and green tea infusions.

*J. Agric. Food Chem.*, 1997, 45, 2561-2564.

Green teas, Health teas.

Apigenin, Kaempferol, Luteolin, Myricetin, Quercetin.

- 175. Trichopoulou, A., Vasilopoulou, E., Hollman, P., Chamalides, Ch., Foufa, E., Kaloudis, Tr., Kromhout, D., Miskaki, Ph., Petrochilou, I., Poulima, E., Stafilakis, K., and Theophilou, D.**

Nutritional composition and flavonoid content of edible wild greens and green pies: a potential rich source of antioxidant nutrients in the Mediterranean diet.

*Food Chem.*, 2000, 70, 319-323.

Fennel, Chive, Annual saw-thistle, Hartwort, Corn poppy, Dock - broad leaf, Queen Anne's lace, Cretan green pie.

Apigenin, Isorhamnetin, Kaempferol, Luteolin, Myricetin, Quercetin,.

- 176. Tsanova-Savova, S., and Ribarova, F.**

Free and conjugated myricetin, quercetin, and kaempferol in Bulgarian red wines.

*J. Food Comp. Anal.*, 2002, 15, 639-645.

Red wines (Bulgarian).

Kaempfero, Myricetin, Quercetin.

- 177. Tsanova-Savova, S., Ribarova, F., and Gerova, M.**

(+)-Catechin and (-)-Epicatechin in Bulgarian fruits.

*J. Food Comp. Anal.*, 2005 (in press).

Apple, Pear, Peach, Apricot, Plum, Cherry, sweet, Cherry, sour, Raspberry, Blackberry, Strawberry, Blueberry, Grape, black, Grape, white, Melon, Fig.  
Catechin, Epicatechin.

- 178. Tsao, R., Yang, R., Young, J.C., and Zhu, H.**

Polyphenolic profiles in eight apple cultivars using high-performance liquid chromatography (HPLC).

*J. Agric. Food Chem.*, 2003, 51, 6347-6353.

Apples (Empire, McIntosh, Cortland, Red Delicious, Northern Spy, Golden Delicious, Ida Red).

Catechin, Cyanidin, Epicatechin, Quercetin.

**179. Tsushida T., and Suzuki, M.**

Content of flavonol glucosides and some properties of enzymes metabolizing the glucosides in onion.

*J. Jap. Soc. Food Sci. Technol.*, 1996, 43, 642-649.

Onion - yellow (7 cultivars), red (1 cultivar), white (3 cultivars).

Isorhamnetin, Quercetin.

**180. Unilever Bestfoods, North America.**

Summary Flavonoid Content of Teas in the U.S. Market.

Unpublished Data, 2002.

Tea, black (regular, decaffeinated, ready to drink (diet and regular, plain and flavored), Tea, green (regular, decaffeinated, ready to drink), Tea, instant (decaffeinated, diet, sweetened with sugar, unsweetened), Tea, Oolong.

Catechin, Epicatechin, Epicatechin gallate, Epigallocatechin, Epigallocatechin gallate, Gallocatechin, Theaflavin, Theaflavin-3-gallate, Theaflavin-3,3 digallate, Thearubigin.

**181. Valles, B. S., Santamaria Victorero, J., Mangas Alonso, J. J., and Blanco Gomis, D.**

High-performance liquid chromatography of the neutral phenolic compounds of low molecular weight in apple juice.

*J. Agric. Food Chem.*, 1994, 42, 2732-2736.

Apple juice (N Senora, San Pedro, & San Juan varieties).

Catechin, Epicatechin, Hyperin, Isoquercitrin, Quercetrin, Rutin.

**182. Vandercook, C. E., and Tisserat, B.**

Flavonoid changes in developing lemons grown in vivo and in vitro.

*Phytochem.*, 1989, 28, 799-803.

Lemon.

Hesperidin, Rutin.

**183. van der Sluis, A. A., Dekker, M., de Jager, A., and Jongen, W. M. F.**

Activity and concentration of polyphenolic antioxidants in apple: Effect of cultivar, harvest year, and storage conditions.

*J. Agric. Food Chem.*, 2001, 49(8), 3606-3613.

Apples-w/o skin & whole (Jonagold)

Epicatechin, Quercetin glycosides.

**184. Vuorinen, H., Määttä, Törrönen, R.**



Content of the flavonols Myricetin, Quercetin, and Kaempferol in Finnish berry wines.

*J. Agric. Food Chem.*, 2000, 48, 2675-2680.

Berry wines Red - Black currant, Red currant, Strawberry, Raspberry, black currant-strawberry, raspberry, black currant-crowberry, Black currant-crowberry-rose hip, Crowberry, Bog whortleberry- strawberry-black currant-crowberry, Berry wines White - White currant, Gooseberry. Table wines – red, white.

Kaempferol, Myricetin, Quercetin.

**185. Wang, H., Nair, M. G., Iezzoni, A. F., Strasburg, G. M., Booren, A. M., and Gray, I.**

Quantification and characterization of anthocyanins in Balaton tart cherries.

*J. Agric. Food Chem.*, 1997, 45, 2556-2560.

Cherries - Balaton, Montmorency.

Cyanidin.

**186. Wang, H. F., Helliwell, K.**

Determination of flavonols in green and black tea leaves and green tea infusions by high-performance liquid chromatography.

*Food Res. Int.*, 2001, 34, 223-227.

Green tea leaves, Black tea leaves, Green tea infusions.

Kaempferol, Myricetin, Quercetin.

**187. Wang, M., Simon, J. E., Aviles, I. F., He, K., Zheng, Q-Y., Tadmor, Y.**

Analysis of antioxidative phenolic compounds in artichoke (*Cynara scolymus* L.).

*J. Agric. Food Chem.*, 2003, 51, 601-608.

Artichoke heads (Imperial Star, Green Globe, Violet).

Apigenin, Luteolin, Naringenin.

**188. Wang, S.Y., Zheng, W., and Galleta, G.**

Cultural system affects fruit quality and antioxidant capacity in strawberries.

*J. Agric. Food Chem.*, 2002, 50, 6534-6542.

Strawberries (Allstar, Earliglow, Delmarvel, Latestar, Lester, Mohawk, Northeaster, Redchief, B28, B35, B244-89, MEUS 8, MEUS 9, US 292).

Cyanidin, Kaempferol, Pelargonidin, Quercetin.

**189. Wang, S. Y., and Lin, H-S.**

Compost as a soil supplement increases the level of antioxidant compounds and oxygen radical absorbance capacity in strawberries.

*J. Agric. Food Chem.*, 2003, 51, 6844-6850.

Strawberries (Allstar, Honeoye).

Cyanidin, Kaempferol, Pelargonidin.

**190. Wu, X., Beecher, G. R., Holden, J. M., Haytowitz, D. B., Gebhardt, S. E., and Prior, R. L.**

Concentrations of anthocyanins in common foods in the United States and estimation of normal consumption.

Fruits: Apples (Fuji, Gala, Red delicious), Blackberry, Marion blackberry, Blueberry (cultivated, wild), Cherry (sweet), Chokeberry, cranberry, Currant (black, red), Elderberry, Gooseberry, Grape (red, Concore), Nectarine, Peach, Plum (black), Raspberry (black, red), Strawberry. Vegetables: Black bean, Eggplant, Red cabbage, Red leaf lettuce, Red onion, Red radish, Small red beans. Nuts: Pistachio. Cyanidin, Delphinidin, Malvidin, Pelargonidin, Peonidin, Petunidin.  
*J. Agric. Food Chem.*, 2006, 54, 4069-4075.

**191. Wu, X., Gu, L., Prior, R. L., and McKay, S.**

Characterization of anthocyanins and proanthocyanidins in some cultivars of *Ribes*, *Aronis*, and *Sambucus* and their antioxidant capacity.  
*J. Agric. Food Chem.*, 2004, 52, 7846-7856.

Currants (black cv. Ben Alder, Ben Navis, Ben, Lomond, Ben Tirran, Titania, Ukraine), Gooseberries (cv. Winham, Lancashire, Dan's Mistake, Careless), Chokeberries, Elderberries, Red Currants.  
Cyanidin, Delphinidin, Pelargonidin, Peonidin, Petunidin.

**192. Yamada, K., Naemura, A., Sawashita, N., Noguchi, Y., and Yamamoto, J.**

An onion variety has natural antithrombotic effect as assessed by thrombosis/thrombolysis models in rodents.  
*Thrombosis Res.*, 2004, 114, 213-220.

Onion yellow (Kitamiko27, Toyohira, Kitawasa3, Tsukisappu, Superkitamomiji, CS3-12, Rantaro, 2935A, K83211), Onion red (Tsukiko22).  
Quercetin.

**193. Yao, L., Jiang, Y., Singanusong, R., D'Arcy, B., Datta, N., Caffin, N., and Raymont, K.**

Flavonoids in Australian Melaleuca, Guia, Lophostemon, Banksia and Helianthus honeys and their potential for floral authentication.  
*Food Res. Int.*, 2004, 37, 166-174.  
Honeys (Australia).  
Isoramnetin, Kaempferol, Luteolin, Myricetin, Quercetin.

**194. Yao, L., Jiang, Y., D'Arcy, B., Singanusong, R., Datta, N., Caffin, N., and Raymont, K.**

Quantitative high-performance liquid chromatography analyses of flavonoids in Australian Eucalyptus honeys.  
*J. Agric. Food Chem.*, 2004, 52, 210-214.  
Honeys (Australian Eucalyptus).  
Isoramnetin, Kaempferol, Luteolin, Myricetin, Quercetin.

**195. Yilmaz, Y., and Toledo, R. T.**

Major flavonoids in grape seeds and skins: Antioxidant capacity of catechin, epicatechin, and gallic acid.

*J. Agric. Food Chem.*, 2004, 52, 255-260.  
Grape seeds (Muscadine).  
Catechin, Epicatechin.

- 196. Yoo, K. M., Lee, K. W., Park, J. B., Lee, H. J., and Hwang, I. K.**  
Variation in major antioxidants and total antioxidant activity of yuzu (*Citrus junos Sieb ex Tanaka*) during maturation and between cultivars.  
*J. Agric. Food Chem.*, 2004, 52, 5907-5913.  
Yuzu (Citrus fruit) cv. Wando, Goheung, Sadeung.  
Hesperetin, Naringenin.
- 197. Yusof, S., Ghazali, H. M., and King, G. S.**  
Naringin content in local citrus fruits.  
*Food Chem.*, 1990, 37, 113-121.  
Pummelo, Rough lime.  
Naringin.
- 198. Zafrilla, P., Ferreres, F., and Tomas-Barberan, F. A.**  
Effect of processing and storage on the antioxidant ellagic acid derivatives and flavonoids of red raspberry (*Rubus idaeus*) jams.  
*J. Agric. Food Chem.*, 2001, 49(8), 3651-3655.  
Raspberries raw and Jam.  
Kaempferol, Quercetin.
- 199. Zheng, W. and Wang, S. Y.**  
Antioxidant activity and phenolic compounds in selected herbs.  
*J. Agric. Food Chem.*, 2001, 49(11), 5165-5170.  
Garden Sage, Marjoram-hard, sweet, Mexican Oregano, Garden Thyme, Rosemary.  
Apigenin, Kaempferol-3-O-rhamnosyl-(1-2)-rhamnosyl-(1-6)-glucoside, Luteolin,  
Naringin, Quercetin-3-O-rhamnosyl-(1-2)-rhamnosyl-(1-6)-glucoside, Rutin.