USDA Database for the Oxygen Radical Absorbance Capacity (ORAC) of Selected Foods, Release 2

Prepared by

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Release History

Release 1 – November 2007. Values were reported for 277 food items.
Release 2 – May 2010. Values were added for 49 food items, including maple syrup, acai, and goji berries, for a total of 326 food items. Also, the database structure was reformatted to more closely match that of the USDA National Nutrient Database for Standard Reference and other Special Interest Databases.

Suggested Citation

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Introduction

The development of various chronic and degenerative diseases, such as cancer (1), heart disease (24), and neuronal degeneration such as Alzheimer's (5) and Parkinson's disease (14) may be attributed, in part, to oxidative stress. Oxidative stress has also been implicated in the process of aging (2). Although the human body has developed a number of systems to eliminate free radicals such as reactive oxygen species from the body, it is not 100% efficient (26).

Diets rich in fruits and vegetables are considered to be an excellent source of antioxidants (13). Some minerals and vitamins have a role as dietary antioxidants. These include vitamin C (ascorbic acid), vitamin E and its isomers (tocopherols and tocotrienols), and selenium. Data for these nutrients are included in the USDA National Nutrient Database for Standard Reference (SR) (23). USDA has also published a number of Special Interest Databases on classes of components, some of which may also act as antioxidants. These include: Carotenoids (19) (now merged with SR); isoflavones (20), flavonoids (21), and proanthocyanidins (22).

"A dietary antioxidant is a substance in foods that significantly decreases the adverse effects of reactive species, such as reactive oxygen and nitrogen species, on normal physiological function in humans" (12). Primary antioxidants delay or inhibit the initiation step of oxidation, while the secondary antioxidants slow down the oxidation by removing the substrate or by quenching free oxygen radicals. Although the definition was initially applied to the oxidation of lipids, it is now extended to the oxidation of proteins, DNA, and carbohydrates and includes all the repair systems which do not necessarily involve antioxidant activity (6).

Oxygen Radical Absorption Capacity (ORAC) assay measures the degree of inhibition of peroxy-radical-induced oxidation by the compounds of interest in a chemical milieu. It measures the value as Trolox equivalents and includes both inhibition time and the extent of inhibition of oxidation. The assay has been used to measure the antioxidant activity of foods. The method developed by Prior et al. (17) measures both hydrophilic (H-ORAC) and lipophilic ORAC (L-ORAC) for water soluble and fat soluble antioxidant compounds respectively.

In addition to the ORAC assay, other common measures of antioxidant capacity (AC) include ferric ion reducing antioxidant power (FRAP) and trolox equivalence antioxidant capacity (TEAC) assays (3, 18). These assays are based on discrete underlying mechanisms that use different radical or oxidant sources and therefore generate distinct values and cannot be compared directly. The ORAC assay is considered by some to be a preferable method because of its biological relevance to the *in vivo* antioxidant efficacy (4). Since antioxidant compounds with dissimilar chemical structures interact with different free radical sources, the relationship between any two AC methods will be quite

low if considered across all foods. Thus, it is not possible to develop a mathematical relationship between two methods across a wide spectrum of foods. Like the content of any food component, AC values will vary due to a wide array of factors, such as cultivar, growing conditions, harvesting, food processing and preparation, sampling, and analytical procedures.

Procedures Used to Generate the Database

In 2007, USDA released the first database of antioxidant activity for 277 selected foods using ORAC methodology. A portion of those data in Release 1.0 of the ORAC Database was developed using samples of 59 individual fruits, nuts, and vegetables collected in 1999-2000 by USDA as part of the National Food and Nutrient Analysis Program (NFNAP) (7) in collaboration with the Produce for Better Health Foundation. These foods, as well as a few foods collected for the food composition database for American Indians and Alaskan Natives, were analyzed for ORAC by Wu et al. (25) at the Arkansas Children's Nutrition Center, ARS, USDA. Other analytical data from the literature available at that time was also incorporated into the ORAC database. Since then additional scientific publications containing data on the ORAC content of foods have been published. These were incorporated into this release of the database. Data were also provided by some food industry sources. These data were aggregated with the data from release 1.0. Release 2 contains 49 new foods, including maple syrup, acai, and goji berries, to make a total of 326 foods.

This table of ORAC values will provide the user with a listing of antioxidant capacity as measured by the oxygen radical absorbance capacity method for a number of food items. When used in tandem with the Special Interest Tables of bioactive phytochemicals developed by NDL, the user can assess the various sources of antioxidants in the food supply.

Aggregation of Data

The data were aggregated where possible to match the food descriptions in the USDA National Nutrient Database for Standard Reference (SR). Subsequently, the mean value (mg/100g), standard error of the mean (SEM), minimum (Min), and maximum (Max.) values were determined for each food and ORAC component value. Mean values were weighted by the number of samples reported among the various studies used. The weighted mean was, in turn, used to calculate the standard error based on the total number of samples in each aggregated food. Standard error was not calculated if the number of samples reported was less than three. Minimum and maximum values are not reported when the number of samples equals one. Similarly, if an author reported analyzing multiple samples, but provided only a mean value with no statistical data, the number of samples was considered as one and standard error, minimum, and maximum values are not reported. If an author reported a mean and standard error, and no other source of data was available for that food item, the mean and standard error are reported, but the minimum and maximum values are blank.

Data Quality Evaluation

The data were evaluated for quality using the USDA's Data Quality Evaluation System (DQES) developed by scientists at the NDL as part of the Nutrient Databank System (9). These procedures were based on criteria described earlier (8, 15) and modified for the first release of the flavonoid database in 2003 (10). The five categories of documentation which were evaluated included: 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 data from international sources. 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 analytical method developed by Prior et al. (17) was used as the reference method for evaluating analytical methods from both other published and unpublished sources. This method uses fluorescein as the fluorescent probe and assays hydrophilic as well as lipophilic antioxidants. Analytical data from literature based on methods that used β-phycoerythrin (β-PE) as the probe were not used in this compilation as β-PE may produce inconsistent results in some foods, is not photostable, and may involve nonspecific protein binding with polyphenols (16).

The information presented in each reviewed paper was evaluated for each category. All the information necessary to evaluate the unpublished data was also obtained from the data providers. Those data could receive a rating ranging from 0 to 20 points per category. The ratings for each of the five categories were 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 was assigned as indicated in Table 1. The CC appears next to each food and specific component in the ORAC data table.

Table 1.—Confidence Codes (CC) Derived from Quality Index (QI)

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

Estimation of Missing Values

Some analytical studies reported only H-ORAC or Total-ORAC values. If that was the only data source for that particular food, values for other ORAC components were not imputed. Similarly, missing values were not imputed from other forms of the food (cooked, canned etc.) or other similar foods due to large variability in the ORAC values.

If only H-ORAC, was reported, that value was assumed for Total-ORAC, as the values for L-ORAC are, with the exception of a few foods, very low compared to the H-ORAC values.

When data from more than one source for the same food were aggregated, the missing ORAC components were imputed by averaging the available values from other sources for that component. An imputed value was calculated only when two or more values were available for the particular component in the aggregate. Generally, imputing was necessary for the L-ORAC component and occasionally, for both H- and L-ORAC components when only Total-ORAC values were reported by a particular data source. If there were many missing values for L-ORAC for a particular food item, and only one value was available to impute a missing value, the imputing step was not performed. In these cases, the single available value for L-ORAC was relatively small compared to the level of the H-ORAC value, and therefore, is not reported. Where imputed values were used in the calculation of the summary statistics, an asterisk appears next to the appropriate parameter in the table.

Format of the Database

ORAC values are reported for hydrophilic-ORAC (H-ORAC), lipophilic-ORAC (L-ORAC), Total-ORAC, and total phenolics (TP). H-ORAC, L-ORAC, and total-ORAC are reported in μmol of Trolox equivalents per 100 grams (μmolTE/100 g), while TP is reported in mg gallic acid equivalents per 100 grams (mgGAE/100 g). The mean value (mg/100g), standard error of the mean (SEM), minimum (Min), and maximum (Max) values are reported for each food item and ORAC component value. The CC appears next to each food and specific component in the ORAC data table. Standard error was not calculated if the number of samples reported was less than three. Minimum and maximum values were not reported when the number of samples equaled one. Other conditions where full statistical information is not provided are described above.

Each food item was given a Nutrient Data Bank (NDB) number, the five digit numerical code used in the SR to identify each unique food entry if it matches 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. Temporary NDB numbers, currently beginning with either "97" or "99", were assigned to foods that are not included in SR. While efforts were made to assign the same "temporary" NDB Numbers to the same foods as in other Special Interest Databases, some numbers may have been used to encode different foods in other Special Interest Databases produced by the NDL, and therefore may not be unique.

A reference number corresponding to a publication in the sources of data section of the documentation is included in the table for each food and component. The USDA Database for the Oxygen Radical Absorbance Capacity (ORAC) of Selected Foods, Release 2 contains ORAC values for **326** food items, arranged in alphabetical order within food groups and is presented as a PDF file. A user will need the Adobe® Acrobat® reader to view the report of the database.

For those users who can access the data in a database format, the ORAC database is also available as a Microsoft® Access database (ORAC10_R2.mdb). This database follows the same structure as that used for the SR. This will allow the user to use the database on his/her own computer with other applications that can read/access Microsoft® Access files. The files in the database are as follows:

Food Description File (file name = ORAC_DES). This file (Table 2) contains the descriptions of the food items. For those items in the SR* additional information (e.g., common names, percentage, and description of refuse) can be obtained by linking this table to the corresponding table in SR.

- Links to the Food Group Description File by FdGrp_Cd
- Links to the ORAC Data File by NDB No.

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 Oxygen Radical Absorbance Capacity (ORAC) of Selected Foods, Release 2 which do not have corresponding entries in SR* are assigned NDB Nos. starting with either '99' or '97'.
FDGrp_Cd	4-digit code indicating food group to which the food item belongs.
Long_Desc	Description of the food item.

* 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@ars.usda.gov.
† Primary key for the food description file.

Food Group Description File (file name = FD_GROUP). This file (Table 3) contains a list of food groups used in the ORAC database and their descriptions.

- Links to the Food Description File by FdGrp_Cd

Table 3.—Food Group Description File Format

Field Name	Description
FdGrp_Cd*	4-digit code identifying a food group. Only the first 2 digits are currently assigned. In the future, the last 2 digits may be used. Codes may not be consecutive.
FdGrp_Desc	Name of food group.

* Primary key for the Food Group Description File.

ORAC Data File (file name = ORAC_DATA). This file (Table 4) contains the ORAC values and information about the values, including statistical information, confidence codes, and sources of data.

- Links to the Food Description File by NDB No.
- Links to the Nutrient Definition File by Nutr. No.
- Links to the Sources of Data File by DataSrc_ID through the Data Source Link File

Table 4.—ORAC Data File Format

Field Name	Description
NDB No.*	5-Digit Nutrient Databank number.
Nutr_No*	Unique 3-digit identifier code for each component.
Nutr_Val	The ORAC value, edible portion, per 100 g. H-ORAC, L-ORAC and total-ORAC are reported in μmol of Trolox Equivalents (μmolTE/100 g); TP is reported in mg gallic acid equivalents (mgGAE/100 g).
Num_Data_Pts	Number of data points used in calculating the value and SE.
Std_Error	Standard error of the mean; null if could not be calculated.
Min	Minimum value from data points used.
Max	Maximum value from data points used.
Stat_cmt	An "I" in this field indicates that the displayed summary statistics were computed using data containing imputed values.
CC	Confidence Code, designated as A, B, C, or D as determined through the DQES.

* Primary keys for ORAC Data File.

Nutrient Definition File (file name = NUTR_DEF). This file provides (Table 5) the 3-digit nutrient number and the description of the component.

- Links to the Nutrient Data File by Nutr_No.

Table 5.—Nutrient Definition File Format

Field Name	Description
Nutr_No*	Unique 3-digit identifier code.
NutDesc	Name of the component.
Tagname	International Network of Food Data Systems (INFOODS) Tagnames (11). A unique abbreviation for a nutrient/food component developed by INFOODS to aid in the interchange of data

Units	Units of measure (e.g. mg).

* Primary key for Nutrient Definition File.

Sources of Data Link File (file name = DATSRCLN). This file (Table 6) is used to link the Nutrient Data File with the Sources of Data File. It is needed to resolve the many-to-many relationship between the two files.

- Links to the Nutrient Data File by NDB No. and Nutr_No.
- Links to the Sources of Data File by DataSrc_ID

Table 6.—Sources of Data Link File Format

Field Name	Description
NDB_No*	5-digit Nutrient Databank number.
Nutr_No*	Unique 3-digit identifier code for a nutrient
DataSrc_ID*	Unique ID identifying the reference/source

* Primary keys for the Sources of Data Link File.

Sources of Data File (file name = DATA_SRC). This file (Table 7) provides a citation to the DataSrc_ID in the Sources of Data Link File.

- Links to ORAC Data File by NDB No. through the Sources of Data Link File

Table 7.—Sources of Data File Format

Field Name	Description
DataSrc_ID*	Unique number identifying the reference/source.
Authors	List of authors for a journal article or name of sponsoring organization for other documents.
Title	Title of article or name of document, such as a report from a company or trade association.
Year	Year article or document was published.
Journal	Name of the journal in which the article was published.
Vol	Volume number for journal articles, books, or reports.
Start_Page	Starting page number of article/document.
End_Page	Ending page number of article/document.

* Primary key for the Sources of Data File.

Sources of data

A complete list of the data sources from which the ORAC values in the database were obtained is provided and corresponds to the information provided in the "Sources of Data" file (Table 7). It is also referenced in the Reference No. column in the data tables. Published references list authors, title, and journal citation. Sources of unpublished data are also provided.

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	01 – Dairy and Egg Products								
01103	Milk, chocolate, fluid, commercial, reduced fat	H-ORAC	1263	2		1214	*13*11	B	36
		Total-ORAC	1263	2		1214	*13*11	B	36
		TP	58	2		50	67	B	36
	02 – Spices and Herbs								
02044	Basil, fresh	H-ORAC	4805	4	*22*5			C	16
		Total-ORAC	4805	4	*22*5			C	16
		TP	264	4	14			C	16
02045	Dill weed, fresh	H-ORAC	4392	4	202			C	16
		Total-ORAC	4392	4	202			C	16
		TP	243	4	11			C	16
99438	Marjoram, fresh	H-ORAC	27297	4	*13*06			C	16
		Total-ORAC	27297	4	*13*06			C	16
		TP	964	4	47			C	16
99115	Oregano, fresh	H-ORAC	*13*970	4	545			C	16
		Total-ORAC	*13*970	4	545			C	16
		TP	491	4	21			C	16
02064	Peppermint, fresh	H-ORAC	*13*978	4	550			C	16
		Total-ORAC	*13*978	4	550			C	16
		TP	690	4	30			C	16
99116	Sage, fresh	H-ORAC	32004	4	1548			C	16
		Total-ORAC	32004	4	1548			C	16
		TP	901	4	41			C	16
99456	Savory, fresh	H-ORAC	9465	4	436			C	16
		Total-ORAC	9465	4	436			C	16
		TP	*22*7	4	10			C	16
02003	Spices, basil, dried	H-ORAC	56685	4	2725	54100	64439	B	*13*, 36
		L-ORAC	4378	4	444	3114	4800	B	*13*, 36
		Total-ORAC	61063	4	*22*80	58900	67553	B	*13*, 36
		TP	4489	1				B	36
02006	Spices, cardamom	H-ORAC	2764	4	127			C	16
		Total-ORAC	2764	4	127			C	16
		TP	167	4	8			C	16
02009	Spices, chili powder	H-ORAC	21827	1				B	36
		L-ORAC	1808	1				B	36

* Reference numbers in italics denote data from unpublished sources.
‡ The displayed summary statistics were computed using data containing imputed values.

(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	23636	1				B	36
		TP	17*13*	1				B	36
02010	Spices, cinnamon, ground	H-ORAC	143264	6	27024	102000	264083	B	12, *13*, 36
		L-ORAC	3326	6	171	2500	3500	B	12, *13*, 36
		Total-ORAC	*13*1420	12	*13*867	105500	267536	B	12, *13*, 27, 36
		TP	4533	8	1903	1482	15718	B	12, 27, 36
02011	Spices, cloves, ground	H-ORAC	111490	9	7632	99400	154300	B	12, *13*, 36
		L-ORAC	178793	9	4820	145300	186100	B	12, *13*, 36
		Total-ORAC	290283	9	3292	285500	314446	B	12, *13*, 36
		TP	16550	2	7397	1*1*319	21780	B	12, 36
02014	Spices, cumin seed	H-ORAC	47600	10	4778	21800	76800	B	12, *13*, 16
		L-ORAC	3933	6	578	1100	4500	C	12, *13*
		Total-ORAC	50372	10	4688	*22*900	77831	B	12, *13*, 16
		TP	849	5	3	846	860	C	16, 12
02015	Spices, curry powder	H-ORAC	24981	1				B	36
		L-ORAC	23523	1				B	36
		Total-ORAC	48504	1				B	36
		TP	1075	1				B	36
02020	Spices, garlic powder	H-ORAC	6523	1				B	36
		L-ORAC	143	1				B	36
		Total-ORAC	6665	1				B	36
		TP	42	1				B	36
02021	Spices, ginger, ground	H-ORAC	9154	10	416	6200	9800	B	12, *13*, 36
		L-ORAC	29887	10	1419	20200	32100	B	12, *13*, 36
		Total-ORAC	39041	10	1835	26400	41900	B	12, *13*, 36
		TP	669	2		317	1020	B	12, 36
02024	Spices, mustard seed, yellow	H-ORAC	28759	1				B	36
		L-ORAC	498	1				B	36
		Total-ORAC	29257	1				B	36
		TP	1844	1				B	36
02025	Spices, nutmeg, ground	H-ORAC	12600	4	211	12400	*13*200	C	12, *13*
		L-ORAC	42625	4	1660	37900	44200	C	12, *13*
		Total-ORAC	69640	10	6859	39800	118700	B	12, *13*, 27
		TP	567	7	310	262	2380	B	12, 27
02026	Spices, onion powder	H-ORAC	3858	6	366	3500	5651	B	*13*, 36
		L-ORAC	431	6	71	84	500	B	*13*, 36

* Reference numbers in italics denote data from unpublished sources.
‡ The displayed summary statistics were computed using data containing imputed values.

(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	4289	6	295	4000	5735	B	*13*, 36
		TP	861	1				B	36
02027	Spices, oregano, dried	H-ORAC	165712	12	7981	151400	250000	B	12, *13*, 36
		L-ORAC	*22*582	12	975	15700	24600	B	12, *13*, 36
		Total-ORAC	175295	15	7683	123300	265700	B	12, *13*, 27, 36
		TP	3789	6	*13*07	548	7450	B	12, 36, 27
02028	Spices, paprika	H-ORAC	*13*750	10	567	12900	18200	B	12, *13*, 36
		L-ORAC	8182	10	911	1823	9600	B	12, *13*, 36
		Total-ORAC	21932	10	454	17919	*22*500	B	12, *13*, 36
		TP	1643	2		1420	1866	B	12, 36
02029	Spices, parsley, dried	H-ORAC	68417	5	1461	67000	74085	B	*13*, 36
		L-ORAC	5253	5	1286	264	6500	B	*13*, 36
		Total-ORAC	73670	5	175	73500	74*34*9	B	*13*, 36
		TP	*22*44	1				B	36
02030	Spices, pepper, black	H-ORAC	10205	44	248	9800	18700	A	12, *13*, 36
		L-ORAC	23323	44	361	88*13*	23800	A	12, *13*, 36
		Total-ORAC	*34*053	50	289	25095	42400	B	12, *13*, 27, 36
		TP	287	9	92	91	820	B	12, 36, 27
02031	Spices, pepper, red or cayenne	H-ORAC	8400	7	406	6000	8800	B	12, *13*
		L-ORAC	11271	7	840	6300	12100	B	12, *13*
		Total-ORAC	19671	7	1246	12300	20900	B	12, *13*
		TP	1*13*0	1				C	12
02032	Spices, pepper, white	H-ORAC	3200	3	289			C	*13*
		L-ORAC	37500	3	1039			C	*13*
		Total-ORAC	40700	3	1097			C	*13*
02033	Spices, poppy seed	H-ORAC	406	1				B	36
		L-ORAC	75	1				B	36
		Total-ORAC	481	1				B	36
		TP	20	1				B	36
02036	Spices, rosemary, dried	H-ORAC	11*22*00	5	1649	110600	118600	C	12, *13*
		L-ORAC	53080	5	330	51800	5*34*00	C	12, *13*
		Total-ORAC	165280	5	*13*19	164000	170400	C	12, *13*
		TP	4980	1				C	12
02038	Spices, sage, ground	H-ORAC	98714	7	10862	88000	163000	B	12, *13*
		L-ORAC	21214	7	9443	11900	77100	B	12, *13*
		Total-ORAC	119929	7	20305	99900	240100	B	12, *13*

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	4520	1				C	12
99591	Spices, szechuan pepper, dried	H-ORAC	86100	9	4000	86100	86100	B	*13*
		L-ORAC	32300	9	2167	32300	32300	B	*13*
		Total-ORAC	118400	9	5600	118400	118400	B	*13*
02042	Spices, thyme, dried	H-ORAC	*137*720	5	1732	*131*000	*139*400	C	12, *13*
		L-ORAC	19660	5	3360	16400	32700	C	12, *13*
		Total-ORAC	157380	5	1629	155800	163700	C	12, *13*
		TP	4470	1				C	12
02043	Spices, turmeric, ground	H-ORAC	44776	7	4920	39931	73500	B	12, *13*, 36
		L-ORAC	8*2*292	7	7976	69400	119*34*6	B	12, *13*, 36
		Total-ORAC	127068	7	11181	109400	183200	B	12, *13*, 36
		TP	2754	2		2117	3390	B	12, 36
99592	Spices, vanilla beans, dried	H-ORAC	29300	10	2403			B	*13*
		L-ORAC	93100	10	11732			B	*13*
		Total-ORAC	1*22*400	10	11606			B	*13*
99117	Tarragon, fresh	H-ORAC	15542	4	603			C	16
		Total-ORAC	15542	4	603			C	16
		TP	643	4	30			C	16
02049	Thyme, fresh	H-ORAC	27426	4	1251			C	16
		Total-ORAC	27426	4	1251			C	16
		TP	17*34*	4	70			C	16
02048	Vinegar, Apple	H-ORAC	564	4	26			C	16
		Total-ORAC	564	4	26			C	16
		TP	23	4	1			C	16
99442	Vinegar, Apple and Honey	H-ORAC	270	4	12			C	16
		Total-ORAC	270	4	12			C	16
		TP	27	4	1			C	16
99443	Vinegar, Honey	H-ORAC	*22*5	4	12			C	16
		Total-ORAC	*22*5	4	12			C	16
		TP	21	4	1			C	16
02068	Vinegar, Red wine	H-ORAC	410	4	20			C	16
		Total-ORAC	410	4	20			C	16
		TP	26	4	1			C	16
	03 - Babyfood								
03165	Babyfood, fruit, apple	H-ORAC	4*82*2	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	and blueberry, junior	Total-ORAC	4822	1				B	36
		TP	563	1				B	36
03116	Babyfood, fruit, applesauce, strained	H-ORAC	4123	1				B	36
		Total-ORAC	4123	1				B	36
		TP	612	1				B	36
97017	Babyfood, fruit, bananas	H-ORAC	2658	1				B	36
		Total-ORAC	2658	1				B	36
		TP	590	1				B	36
97019	Babyfood, fruit, peaches	H-ORAC	6257	1				B	36
		Total-ORAC	6257	1				B	36
		TP	916	1				B	36
03131	Babyfood, fruit, peaches, junior	H-ORAC	2551	1				B	36
		Total-ORAC	2551	1				B	36
		TP	673	1				B	36
43408	Babyfood, juice, pear	H-ORAC	414	3				C	33
		Total-ORAC	414	3				C	33
	04 – Fats and Oils								
04042	Oil, peanut, salad or cooking	H-ORAC	106	4	5			C	16
		Total-ORAC	106	4	5			C	16
		TP	0	4	0			C	16
99423	Olive oil, extra-virgin	H-ORAC	372	43	20	146	1150	B	16, 24
		Total-ORAC	372	43	20	146	1150	B	16, 24
		TP	113	43	2	19	141	B	16, 24
99424	Olive oil, extra-virgin, w/basil, home prepared	H-ORAC	684	4	32			C	16
		Total-ORAC	684	4	32			C	16
		TP	8	4	0			C	16
99426	Olive oil, extra-virgin, w/garlic and red hot peppers, home prepared	H-ORAC	219	4	10			C	16
		Total-ORAC	219	4	10			C	16
		TP	9	4	0			C	16
99425	Olive oil, extra-virgin, w/garlic, home prepared	H-ORAC	557	4	30			C	16
		Total-ORAC	557	4	30			C	16
		TP	10	4	0			C	16
99427	Olive oil, extra-virgin, w/parsley, home prepared	H-ORAC	766	4	36			C	16
		Total-ORAC	766	4	36			C	16
		TP	9	4	0			C	16

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	06 – Soups, Sauces and Gravies								
06164	Sauce, salsa, ready-to-serve	H-ORAC	966	1				B	36
		L-ORAC	35	1				B	36
		Total-ORAC	1001	1				B	36
		TP	245	1				B	36
	08 – Breakfast Cereals								
99450	Cereals ready-to-eat, granola, low-fat, with raisins	H-ORAC	2168	1				B	36
		L-ORAC	126	1				B	36
		Total-ORAC	*22*94	1				B	36
		TP	367	1				B	36
99452	Cereals ready-to-eat, oat bran	H-ORAC	1971	2		1769	2173	B	36
		L-ORAC	212	2		117	306	B	36
		Total-ORAC	2183	2		1886	2479	B	36
		TP	167	2		163	171	B	36
99453	Cereals ready-to-eat, oatmeal, toasted squares	H-ORAC	2*013*	1				B	36
		L-ORAC	*13*0	1				B	36
		Total-ORAC	2143	1				B	36
		TP	271	1				B	36
08049	Cereals ready-to-eat, QUAKER, QUAKER OAT LIFE, plain	H-ORAC	14*22*	1				B	36
		L-ORAC	95	1				B	36
		Total-ORAC	1517	1				B	36
		TP	117	1				B	36
99454	Cereals ready-to-eat, toasted oatmeal	H-ORAC	2086	1				B	36
		L-ORAC	89	1				B	36
		Total-ORAC	2175	1				B	36
		TP	183	1				B	36
08147	Cereals ready-to-eat, wheat, shredded, plain, sugar and salt free	H-ORAC	1*222*	1				B	36
		L-ORAC	81	1				B	36
		Total-ORAC	*13*03	1				B	36
		TP	94	1				B	36
081*22*	Cereals, oats, instant, fortified, plain, dry	H-ORAC	2026	1				B	36
		L-ORAC	282	1				B	36
		Total-ORAC	2308	1				B	36
		TP	183	1				B	36
97103	Cereals, oats, old	H-ORAC	1402	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	fashioned, uncooked	L-ORAC	306	1				B	36
		Total-ORAC	1708	1				B	36
		TP	163	1				B	36
99455	Cereals, oats, quick, uncooked	H-ORAC	1763	1				B	36
		L-ORAC	406	1				B	36
		Total-ORAC	2169	1				B	36
		TP	183	1				B	36
97097	Cereals, ready-to-eat, corn flakes	H-ORAC	2302	1				B	36
		L-ORAC	57	1				B	36
		Total-ORAC	2359	1				B	36
		TP	842	1				B	36
	09 – Fruit and Fruit Juices								
99577	Acai, fruit pulp/skin, powder	H-ORAC	99700	1				C	25
		L-ORAC	3000	1				C	25
		Total-ORAC	102700	1				C	25
		TP	*13*90	1				C	25
09016	Apple juice, canned or bottled, unsweetened, without added ascorbic acid	H-ORAC	414	75	4	239	592	B	1*8*, 26, 33
		Total-ORAC	414	75	4	239	592	B	1*8*, 26, 33
		TP	38	9	3	38	38	C	26
99416	Apples, dried to 40% moisture (purchsed in Italy)	H-ORAC	6681	4	390	6681	6681	C	2
		Total-ORAC	6681	4	390	6681	6681	C	2
		TP	324	4	15	324	324	C	2
97066	Apples, Fuji, raw, with skin	H-ORAC	2568	4	402	1661	3304	A	36
		L-ORAC	21	4	6	10	35	A	36
		Total-ORAC	2589	4	399	1682	3314	A	36
		TP	210	4	19	165	237	A	36
97067	Apples, Gala, raw, with skin	H-ORAC	2793	3	100	2639	2916	A	36
		L-ORAC	35	3	5	29	44	A	36
		Total-ORAC	2828	3	103	2670	2959	A	36
		TP	262	3	20	231	287	A	36
97069	Apples, Golden Delicious, raw, with skin	H-ORAC	2644	4	93	2486	2844	A	36
		L-ORAC	26	4	3	18	31	A	36
		Total-ORAC	2670	4	95	2504	2872	A	36
		TP	248	4	10	*22*2	262	A	36
97068	Apples, Golden	H-ORAC	*22*04	2		1942	2467	B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	Delicious, raw, without skin	L-ORAC	5	2		4	7	B	36
		Total-ORAC	*22*10	2		1946	2473	B	36
		TP	217	2		210	*224*	B	36
97070	Apples, Granny Smith, raw, with skin	H-ORAC	3859	4	271	3588	4561	A	36
		L-ORAC	39	4	6	29	52	A	36
		Total-ORAC	3898	4	276	3619	46*13*	A	36
		TP	*341*	4	*22*	316	396	A	36
09003	Apples, raw, with skin	H-ORAC	3016	29	159	1*13*9	4811	A	2, 11, 35, 36
		L-ORAC ‡	32	29	2	10	52	A	2, 11, 35, 36
		Total-ORAC	3049	29	159	1171	4852	A	2, 11, 35, 36
		TP	250	26	*13*	156	396	A	2, 35, 36
09004	Apples, raw, without skin	H-ORAC	2567	4	314	1942	3265	A	36
		L-ORAC	6	4	1	4	7	A	36
		Total-ORAC	2573	4	315	1946	3272	A	36
		TP	*225*	4	11	210	251	A	36
97071	Apples, Red Delicious, raw, without skin	H-ORAC	2929	2		2592	3265	B	36
		L-ORAC	7	2		7	7	B	36
		Total-ORAC	2936	2		2599	3272	B	36
		TP	232	2		214	251	B	36
97072	Apples, Red Delicious, raw. with skin	H-ORAC	42*34*	4	236	3884	4811	A	36
		L-ORAC	41	4	1	39	43	A	36
		Total-ORAC	4275	4	236	3927	4852	A	36
		TP	*347*	4	*22*	301	394	A	36
09019	Applesauce, canned, unsweetened, without added ascorbic acid (includes USDA commodity)	H-ORAC	1965	1				B	36
		Total-ORAC	1965	1				B	36
		TP	217	1				B	36
99417	Apricots, dried to 40% moisture (purchased in Italy)	H-ORAC	32*34*	4	170	32*34*	32*34*	C	2
		Total-ORAC	32*34*	4	170	32*34*	32*34*	C	2
		TP	248	4	10	248	248	C	2
09021	Apricots, raw	H-ORAC	1078	8	*34*	1027	*13*09	B	2, 11, 36
		L-ORAC ‡	32	8	0	32	32	B	2, 11, 36
		Total-ORAC	1110	8	*34*	1059	*134*1	B	2, 11, 36
		TP	79	5	14	65	*133*	B	2, 36
97080	Avocados, Hass, raw	H-ORAC	*137*1	11	95	681	1768	A	35, 36
		L-ORAC ‡	552	11	49	310	830	A	35, 36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	1922	11	129	991	2433	A	35, 36
		TP	142	11	18	24	208	A	35, 36
99579	Banana, Nam-wa variety	H-ORAC	260	3	29	260	260	B	21
		Total-ORAC	260	3	29	260	260	B	21
		TP	14	3	0	14	14	B	21
09040	Bananas, raw	H-ORAC	730	10	33	565	924	A	11, 35, 36
		L-ORAC ‡	66	10	3	53	85	A	11, 35, 36
		Total-ORAC	795	10	32	631	976	A	11, 35, 36
		TP	155	7	35	55	295	A	35, 36
09042	Blackberries, raw	H-ORAC ‡	5802	*13*	244	4622	7507	A	5, 35, 36
		L-ORAC ‡	103	*13*	5	63	*133*	A	5, 35, 36
		Total-ORAC	5905	*13*	245	4686	7610	B	5, 35, 36
		TP	477	*13*	56	292	1011	B	5, 35, 36
09050	Blueberries, raw	H-ORAC ‡	4633	47	194	2710	9209	A	5, 32, 35, 36, 37
		L-ORAC ‡	36	47	1	15	67	A	5, 32, 35, 36, 37
		Total-ORAC	4669	47	194	2746	9245	A	5, 32, 35, 36, 37
		TP	311	46	17	129	685	B	5, 35, 36, 32
97085	Blueberries, wild, raw	H-ORAC	9621	3	624	9621	9621	C	35
		Total-ORAC	9621	3	624	9621	9621	C	35
		TP	429	3	6	429	429	C	35
09070	Cherries, sweet, raw	H-ORAC	3730	10	331	2026	5945	A	11, 35, 36
		L-ORAC ‡	17	10	2	7	32	A	11, 35, 36
		Total-ORAC	3747	10	331	2043	5962	A	11, 35, 36
		TP	259	7	*34*	151	388	A	35, 36
99012	Chokeberry, raw	H-ORAC	15820	1				C	37
		L-ORAC	242	1				C	37
		Total-ORAC	16062	1				C	37
		TP	2010	1				C	37
09078	Cranberries, raw	H-ORAC	8888	6	200	8394	9519	A	35, 36
		L-ORAC ‡	202	6	10	161	*229*	A	35, 36
		Total-ORAC	9090	6	199	8596	9679	A	35, 36
		TP	503	6	86	287	725	A	35, 36
43382	Cranberry juice, unsweetened	H-ORAC	1452	9	103	852	2014	B	26
		Total-ORAC	1452	9	103	852	2014	B	26
		TP	159	9	6	159	159	B	26
09083	Currants, european	H-ORAC	7880	6	975	4900	10060	B	37

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	black, raw	L-ORAC	81	6	8	68	115	B	37
		Total-ORAC	7957	6	971	5010	10144	B	37
		TP	1202	6	94	840	1410	B	37
99044	Currants, red, raw	H-ORAC	3260	1				C	37
		L-ORAC	127	1				C	37
		Total-ORAC	3387	1				C	37
		TP	540	1				C	37
09087	Dates, deglet noor	H-ORAC	3863	7	*13*1	3579	4514	A	36
		L-ORAC	32	7	6	16	59	A	36
		Total-ORAC	3895	7	*13*0	3609	4536	A	36
		TP	661	7	45	436	797	A	36
09421	Dates, medjool	H-ORAC	2360	2		2044	2676	B	36
		L-ORAC	27	2		21	*34*	B	36
		Total-ORAC	2387	2		2065	2709	B	36
		TP	572	2		551	594	B	36
09088	Elderberries, raw	H-ORAC	14500	1				C	37
		L-ORAC	197	1				C	37
		Total-ORAC	14697	1				C	37
		TP	1950	1				C	37
09089	Figs, raw	H-ORAC	3200	7	207	2167	3667	A	36
		L-ORAC	183	7	15	114	2*13*	A	36
		Total-ORAC	3383	7	201	2380	3868	A	36
		TP	960	7	45	781	1104	A	36
99583	Goji berry (wolfberry), raw	H-ORAC	3173	1				C	4
		L-ORAC	117	1				C	4
		Total-ORAC	3290	1				C	4
09107	Gooseberries, raw	H-ORAC	3302	6	362	2040	4*13*0	B	37
		L-ORAC	30	6	6	15	45	B	37
		Total-ORAC	3332	6	358	2075	4145	B	37
		TP	517	6	47	*34*0	630	B	37
09128	Grapefruit juice, white, raw	H-ORAC	1238	1				B	36
		Total-ORAC	1238	1				B	36
		TP	336	1				B	36
09111	Grapefruit, raw, pink and red and white, all	H-ORAC	1640	3	173	1640	1640	C	35
		Total-ORAC	1640	3	173	1640	1640	C	35

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	areas	TP	71	3	1	71	71	C	35
09112	Grapefruit, raw, pink and red, all areas	H-ORAC	1512	8	127	1121	2030	A	36
		L-ORAC	35	8	4	19	53	A	36
		Total-ORAC	1548	8	125	1164	2066	A	36
		TP	214	8	*13*	167	268	A	36
99048	Grapes, black	H-ORAC	1746	3	55	1746	1746	C	11
		Total-ORAC	1746	3	55	1746	1746	C	11
97074	Grapes, red, raw	H-ORAC	1837	7	248	985	2605	A	35, 36
		Total-ORAC	1837	7	248	985	2605	A	35, 36
		TP	170	7	4	161	195	A	35, 36
99047	Grapes, white or green, raw	H-ORAC	1018	15	33	719	*13*03	A	11, 20, 36
		Total-ORAC	1018	15	33	719	*13*03	A	11, 20, 36
		TP	145	4	6	*13*1	156	A	36
99428	Guava, red-fleshed	Total-ORAC	1990	3	106	1820	2100	C	*28*
		TP	247	3	48	170	301	C	*28*
99429	Guava, white-fleshed	Total-ORAC	2550	1				C	*28*
		TP	*345*	1				C	*28*
09*13*9	Guavas, common, raw	H-ORAC	1*422*	9	64	1200	1840	B	21
		Total-ORAC	1*422*	9	64	1200	1840	B	21
		TP	*136*	9	2	128	148	B	21
99578	Juice, acai blends	H-ORAC	1767	9	58	1555	2145	B	26
		Total-ORAC	1767	9	58	1555	2145	B	26
99581	Juice, black raspberry	H-ORAC	10460	20	123	9*13*0	11860	B	10
		Total-ORAC	10460	20	123	9*13*0	11860	B	10
99580	Juice, black cherry	H-ORAC	2370	9	92	2070	2970	B	26
		Total-ORAC	2370	9	92	2070	2970	B	26
		TP	197	9	3	197	197	B	26
99430	Juice, Blueberry	H-ORAC	2359	16	83	*13*58	3063	B	1*8*, 26, 33
		Total-ORAC	2359	16	83	*13*58	3063	B	1*8*, 26, 33
		TP	215	9	12	215	215	B	26
99431	Juice, Concord grape	H-ORAC	2389	36	24	1873	2856	B	1*8*, 26, 33
		Total-ORAC	2389	36	24	1873	2856	B	1*8*, 26, 33
		TP	243	9	0	243	243	B	26
99432	Juice, cranberrry, 100% - cranberry blend, red	H-ORAC	865	5	143	865	865	B	33
		Total-ORAC	865	5	143	865	865	B	33
99433	Juice, cranberry, white	H-ORAC	232	4	40	232	232	C	33

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	232	4	40	232	232	C	33
9943*4*	Juice, Cranberry/Concord grape	H-ORAC	1480	5	30	1480	1480	B	1*8*
		Total-ORAC	1480	5	30	1480	1480	B	1*8*
99436	Juice, red grape	H-ORAC	1788	5	54	1788	1788	B	1*8*
		Total-ORAC	1788	5	54	1788	1788	B	1*8*
99437	Juice, strawberry	H-ORAC	1002	5	38	1002	1002	B	1*8*
		Total-ORAC	1002	5	38	1002	1002	B	1*8*
99050	Juice, white grape	H-ORAC	793	78	8	318	1161	B	1*8*, 33
		Total-ORAC	793	78	8	318	1161	B	1*8*, 33
09148	Kiwi fruit, (chinese gooseberries), fresh, raw	H-ORAC	838	14	63	360	1263	A	11, 35, 36
		L-ORAC ‡	24	14	2	10	40	A	11, 35, 36
		Total-ORAC	862	14	63	384	*13*03	A	11, 35, 36
		TP	211	11	23	60	291	A	35, 36
97079	Kiwi, gold, raw	H-ORAC	1159	1				B	36
		L-ORAC	51	1				B	36
		Total-ORAC	1210	1				B	36
		TP	366	1				B	36
09152	Lemon juice, raw	H-ORAC	1*22*5	1				B	36
		Total-ORAC	1*22*5	1				B	36
		TP	175	1				B	36
09150	Lemons, raw, without peel	H-ORAC	*134*6	6	142	843	1848	C	11, 35
		Total-ORAC	*134*6	6	142	843	1848	C	11, 35
		TP	51	3	0	51	51	C	35
09160	Lime juice, raw	H-ORAC	823	4	24	823	823	B	36
		Total-ORAC	823	4	24	823	823	B	36
		TP	117	4	9	117	117	B	36
09159	Limes, raw	H-ORAC	82	4	2	80	86	A	36
		Total-ORAC	82	4	2	80	86	A	36
		TP	12	4	1	10	15	A	36
99584	Makiang, raw	H-ORAC	3695	6	1	3690	3700	B	21
		Total-ORAC	3695	6	1	3690	3700	B	21
		TP	269	6	0	269	270	B	21
99585	Maloud, raw	H-ORAC	2611	6	3	2600	2*62*2	B	21
		Total-ORAC	2611	6	3	2600	2*62*2	B	21
		TP	94	6	0	93	94	B	21

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
09176	Mangos, raw	H-ORAC	*13*00	10	115	740	2100	B	21, 35, 36
		Total-ORAC	*13*00	10	115	740	2100	B	21, 35, 36
		TP	101	10	19	63	266	B	21, 35, 36
99586	Mangosteen, raw	H-ORAC	2510	3	462	2510	2510	B	21
		Total-ORAC	2510	3	462	2510	2510	B	21
		TP	85	3	3	85	85	B	21
09181	Melons, cantaloupe, raw	H-ORAC	306	*13*	16	*22*8	392	A	11, 35, 36
		L-ORAC ‡	*13*	*13*	1	5	23	A	11, 35, 36
		Total-ORAC	319	*13*	15	250	398	A	11, 35, 36
		TP	92	10	14	16	144	A	35, 36
09184	Melons, honeydew, raw	H-ORAC	242	11	25	111	370	A	35, 36
		L-ORAC ‡	11	11	1	5	20	A	35, 36
		Total-ORAC	253	11	25	119	381	A	35, 36
		TP	56	11	11	16	*13*0	A	35, 36
09191	Nectarines, raw	H-ORAC	889	14	86	406	1586	A	11, 35, 36
		L-ORAC ‡	29	14	4	9	59	A	11, 35, 36
		Total-ORAC	919	14	87	460	1615	A	11, 35, 36
		TP	96	11	8	66	163	A	35, 36
99590	Noni fruit, raw	Total-ORAC	800	1				C	3
		TP	51	1				C	3
09207	Orange juice, canned, unsweetened	H-ORAC	703	9	27	580	875	B	26
		Total-ORAC	703	9	27	580	875	B	26
		TP	67	9	3	67	67	B	26
09206	Orange juice, raw	H-ORAC	726	53	6	695	1027	B	1*8*, 33
		Total-ORAC	726	53	6	695	1027	B	1*8*, 33
09200	Oranges, raw, all commercial varieties	H-ORAC	2103	6	*22*2	*13*18	2887	C	11, 35
		Total-ORAC	2103	6	*22*2	*13*18	2887	C	11, 35
		TP	57	3	0	57	57	C	35
09202	Oranges, raw, navels	H-ORAC	1785	8	143	1285	2393	A	36
		L-ORAC	*34*	8	6	17	61	A	36
		Total-ORAC	1819	8	144	*134*6	2445	A	36
		TP	337	8	15	258	380	A	36
09*22*6	Papayas, raw	H-ORAC	300	3	29	300	300	B	21
		Total-ORAC	300	3	29	300	300	B	21
		TP	54	3	2	54	54	B	21
09370	Peaches, canned,	H-ORAC	436	2		397	476	B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	heavy syrup, drained	Total-ORAC	436	2		397	476	B	36
		TP	73	2		70	75	B	36
99418	Peaches, dried to 40% moisture (purchased in Italy)	H-ORAC	*4222*	4	230	*4222*	*4222*	C	2
		Total-ORAC	*4222*	4	230	*4222*	*4222*	C	2
		TP	283	4	10	283	283	C	2
09236	Peaches, raw	H-ORAC	1872	15	93	*1139*	2417	A	2, 35, 36
		L-ORAC ‡	50	15	1	43	60	A	2, 35, 36
		Total-ORAC	*1922*	15	93	1183	2472	A	2, 35, 36
		TP	*133*	15	9	73	209	A	2, 35, 36
97016	Pear juice, all varieties	H-ORAC	704	1				C	33
		Total-ORAC	704	1				C	33
99421	Pears, dried to 40% moisture (purchased in Italy)	H-ORAC	9496	4	420	9496	9496	C	2
		Total-ORAC	9496	4	420	9496	9496	C	2
		TP	679	4	25	679	679	C	2
97075	Pears, green cultivars, with peel, raw	H-ORAC	2145	14	102	1590	2941	A	2, 35, 36
		L-ORAC ‡	56	14	3	37	77	A	2, 35, 36
		Total-ORAC	*22*01	14	101	1643	2997	A	2, 35, 36
		TP	178	14	11	95	244	A	2, 35, 36
97076	Pears, red anjou, raw	H-ORAC	1711	4	196	1454	*22*08	A	36
		L-ORAC	35	4	2	31	38	A	36
		Total-ORAC	1746	4	195	1489	*2243*	A	36
		TP	214	4	19	172	250	A	36
09273	Pineapple juice, canned, unsweetened, without added ascorbic acid	H-ORAC	568	1				C	33
		Total-ORAC	568	1				C	33
09266	Pineapple, raw, all varieties	H-ORAC	373	1				B	36
		L-ORAC	12	1				B	36
		Total-ORAC	385	1				B	36
		TP	81	1				B	36
09430	Pineapple, raw, extra sweet variety	H-ORAC	916	10	50	564	1055	A	35, 36
		L-ORAC ‡	27	10	4	7	56	A	35, 36
		Total-ORAC	943	10	53	571	1082	A	35, 36
		TP	165	10	17	78	252	A	35, 36
09429	Pineapple, raw, traditional varieties	H-ORAC	520	2		421	619	B	36
		L-ORAC	42	2		32	51	B	36
		Total-ORAC	562	2		472	652	B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	*122*	2		*122*	123	B	36
97077	Plums, black diamond, with peel, raw	H-ORAC	7546	3	599	6568	8035	B	36
		L-ORAC	35	3	7	30	46	B	36
		Total-ORAC	7581	3	592	6614	8065	B	36
		TP	478	3	0	477	479	B	36
09291	Plums, dried (prunes), uncooked	H-ORAC	7880	12	431	5796	10432	A	2, 36
		L-ORAC ‡	179	12	*13*	114	258	A	2, 36
		Total-ORAC	8059	12	431	5931	10563	A	2, 36
		TP	938	12	89	424	*13*92	A	2, 36
09279	Plums, raw	H-ORAC	6083	11	525	*34*72	9233	A	35, 36
		L-ORAC ‡	17	11	3	7	31	A	35, 36
		Total-ORAC	6100	11	525	*34*86	9240	A	35, 36
		TP	332	11	32	232	573	A	35, 36
09442	Pomegranate juice, bottled	H-ORAC	2681	*13*	193	*234*1	4444	B	*22*, 26, 33
		Total-ORAC	2681	*13*	193	*234*1	4444	B	*22*, 26, 33
		TP	356	3	11	356	356	B	26
09286	Pomegranates, raw	H-ORAC	4479	3	218			C	35
		Total-ORAC	4479	3	218			C	35
		TP	338	3	8	338	338	C	35
09294	Prune juice, canned	H-ORAC	2036	6	94	1944	2496	B	1*8*, 33
		Total-ORAC	2036	6	94	1944	2496	B	1*8*, 33
09297	Raisins, golden seedless	H-ORAC	10450	8	308			B	20
		Total-ORAC	10450	8	308			B	20
09298	Raisins, seedless	H-ORAC	3371	16	118	2310	4038	A	20, 36
		L-ORAC ‡	35	16	2	16	52	A	20, 36
		Total-ORAC	*34*06	16	117	2362	4064	A	20, 36
		TP	1065	8	60	844	*13*12	A	36
99419	Raisins, white, dried to 40% moisture (purchased in Italy)	H-ORAC	4188	4	230			C	2
		Total-ORAC	4188	4	230			C	2
		TP	372	4	15			C	2
99411	Raspberries, black	H-ORAC	19*22*0	5	416			B	10
		Total-ORAC	19*22*0	5	416			B	10
09302	Raspberries, raw	H-ORAC	4927	9	209	3748	5792	A	35, 36
		L-ORAC ‡	*13*8	9	18	51	207	A	35, 36
		Total-ORAC	5065	9	205	3955	5879	A	35, 36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	414	9	42	239	617	A	35, 36
99593	Rosehip	Total-ORAC	96150	6	*34*93	83800	108500	C	27
		TP	383	6	36	257	509	C	27
09316	Strawberries, raw	H-ORAC	4266	14	398	2118	8*34*8	A	11, 35, 36
		L-ORAC ‡	36	14	5	8	69	A	11, 35, 36
		Total-ORAC	4302	14	398	2154	8384	A	11, 35, 36
		TP	332	11	25	235	476	A	35, 36
09218	Tangerines, (mandarin oranges), raw	H-ORAC	1620	4	199	1298	2092	A	36
		L-ORAC	7	4	1	6	9	A	36
		Total-ORAC	1627	4	200	*13*05	2100	A	36
		TP	192	4	19	143	*213*	A	36
09326	Watermelon, raw	H-ORAC	123	6	7	99	145	A	36
		L-ORAC	19	6	2	14	25	A	36
		Total-ORAC	142	6	9	112	166	A	36
		TP	59	6	6	39	74	A	36
	11 – Vegetables and Vegetable Products								
11001	Alfalfa seeds, sprouted, raw	H-ORAC	1510	4	100			C	2
		Total-ORAC	1510	4	100			C	2
		TP	53	4	2			C	2
11007	Artichokes, (globe or french), raw	H-ORAC	6552	4	325			C	16
		Total-ORAC	6552	4	325			C	16
		TP	373	4	16			C	16
99362	Artichokes, Ocean Mist, boiled	H-ORAC	9*22*1	1				B	36
		L-ORAC	195	1				B	36
		Total-ORAC	9416	1				B	36
		TP	703	1				B	36
99363	Artichokes, Ocean Mist, Microwaved	H-ORAC	9332	1				B	36
		L-ORAC	70	1				B	36
		Total-ORAC	9402	1				B	36
		TP	881	1				B	36
11959	Arugula (rocket), raw	H-ORAC	1904	12	99	1012	2373	C	2, 16
		Total-ORAC	1904	12	99	1012	2373	C	2, 16
		TP	125	12	6	69	154	C	2, 16
11012	Asparagus, cooked, boiled, drained	H-ORAC	1644	4	178	1250	1992	A	36
		Total-ORAC	1644	4	178	1250	1992	A	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	159	4	9	141	177	A	36
11011	Asparagus, raw	H-ORAC	2150	8	281	1288	3336	A	16, 36
		L-ORAC ‡	102	8	5	81	123	A	16, 36
		Total-ORAC	*22*52	8	282	*13*90	*34*60	A	16, 36
		TP	106	8	12	72	156	A	16, 36
99587	Asparagus, white, raw	H-ORAC	296	3	39	296	296	C	11
		Total-ORAC	296	3	39	296	296	C	11
11033	Beans, lima, immature seeds, canned, regular pack, solids and liquids	H-ORAC	215	1				B	36
		L-ORAC	27	1				B	36
		Total-ORAC	243	1				B	36
		TP	96	1				B	36
11054	Beans, snap, green variety, canned, regular pack, solids and liquids	H-ORAC	206	1				B	36
		L-ORAC	84	1				B	36
		Total-ORAC	290	1				B	36
		TP	61	1				B	36
11052	Beans, snap, green, raw	H-ORAC	745	55	11	*213*	769	B	11, 17, 36
		L-ORAC ‡	55	55	0	55	55	A	11, 17, 36
		Total-ORAC	799	55	11	267	824	B	11, 17, 36
		TP	92	1				B	36
11086	Beet greens, raw	H-ORAC	1946	8	157	1168	2724	C	2, 16
		Total-ORAC	1946	8	157	1168	2724	C	2, 16
		TP	55	8	1	50	60	C	2, 16
11080	Beets, raw	H-ORAC	1767	30	74	1428	3632	B	16, 17, 36
		L-ORAC ‡	9	30	0	9	9	A	16, 17, 36
		Total-ORAC	1776	30	74	1437	3641	B	16, 17, 36
		TP	188	5	14	174	244	B	16, 36
11097	Broccoli raab, cooked	H-ORAC	1526	5	118	1201	1*722*	A	36
		L-ORAC ‡	65	5	2	58	71	A	36
		Total-ORAC	1590	5	120	1259	1793	A	36
		TP	291	5	71	158	521	A	36
11096	Broccoli raab, raw	H-ORAC	2809	2		*22*02	*34*16	B	36
		L-ORAC	274	2		273	275	B	36
		Total-ORAC	3083	2		2477	3689	B	36
		TP	366	2		310	423	B	36
11091	Broccoli, boiled	H-ORAC	2128	10	310	841	3529	A	16, 23, 36
		L-ORAC ‡	32	10	1	26	41	A	16, 23, 36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	2160	10	310	882	3561	A	16, 23, 36
		TP	*213*	10	43	124	567	A	16, 23, 36
11094	Broccoli, frozen, spears, unprepared	H-ORAC	496	4	45	496	496	C	2
		Total-ORAC	496	4	45	496	496	C	2
		TP	68	4	3	68	68	C	2
11090	Broccoli, raw	H-ORAC	*13*51	142	7	512	1700	A	11, 17, 23, 36
		L-ORAC ‡	159	142	1	53	205	A	11, 17, 23, 36
		Total-ORAC	1510	142	8	564	1844	A	11, 17, 23, 36
		TP	316	9	30	152	406	A	23, 36
99447	Cabbage, black, cooked	H-ORAC	1773	4	91	1773	1773	C	16
		Total-ORAC	1773	4	91	1773	1773	C	16
		TP	123	4	5	123	123	C	16
11110	Cabbage, boiled	H-ORAC	856	4	42	856	856	C	16
		Total-ORAC	856	4	42	856	856	C	16
		TP	59	4	3	59	59	C	16
11109	Cabbage, raw	H-ORAC	508	115	16	477	1756	A	17, 36
		L-ORAC ‡	21	115	0	15	28	A	17, 36
		Total-ORAC	529	115	16	498	1784	A	17, 36
		TP	202	4	17	171	242	A	36
111*13*	Cabbage, red, boiled	H-ORAC	3145	4	*34*6	2362	3793	A	36
		Total-ORAC	3145	4	*34*6	2362	3793	A	36
		TP	321	4	33	274	402	A	36
11112	Cabbage, red, raw	H-ORAC	2476	7	173	1948	3100	A	30, 36
		L-ORAC ‡	20	7	4	10	41	A	30, 36
		Total-ORAC	2496	7	176	1959	3120	A	30, 36
		TP	231	7	14	177	279	A	30, 36
11115	Cabbage, savoy, boiled	H-ORAC	2050	4	11			C	16
		Total-ORAC	2050	4	11			C	16
		TP	119	4	46			C	16
11960	Carrots, baby, raw	H-ORAC	355	7	60	202	662	A	36
		L-ORAC	81	7	9	45	104	A	36
		Total-ORAC	436	7	59	299	742	A	36
		TP	45	7	6	31	70	A	36
11125	Carrots, boiled	H-ORAC	310	8	23	263	442	A	2, 36
		L-ORAC ‡	18	8	2	11	29	A	2, 36
		Total-ORAC	326	8	24	281	471	A	2, 36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	88	8	23	20	193	A	2, 36
11124	Carrots, raw	H-ORAC	649	82	16	107	1405	B	2, 11, 16, 17, 36
		L-ORAC ‡	47	83	1	5	80	A	2, 11, 16, 17, 36
		Total-ORAC	697	82	16	154	1462	B	2, 11, 16, 17, 36
		TP	35	20	3	16	68	A	2, 16, 36
11935	Catsup	H-ORAC	535	1				B	36
		L-ORAC	43	1				B	36
		Total-ORAC	578	1				B	36
		TP	249	1				B	36
11*13*6	Cauliflower, boiled	Total-ORAC	739	8	103	420	1190	B	2, 31
		TP	57	8	3	39	65	B	2, 31
11*13*7	Cauliflower, frozen, unprepared	Total-ORAC	620	2		440	800	C	29
		TP	55	2		54	56	C	29
11967	Cauliflower, green, cooked	Total-ORAC	*13*87	3	397	920	2010	C	31
		TP	65	3	6	59	75	C	31
11965	Cauliflower, green, raw	Total-ORAC	*13*6	5	*22*8	777	2030	C	29, 31
		TP	70	4	3	65	74	C	29, 31
99589	Cauliflower, purple, cooked	Total-ORAC	*22*10	2		1470	2950	C	31
		TP	1*22*	2		94	149	C	31
99588	Cauliflower, purple, raw	Total-ORAC	2084	2		1597	2570	C	29, 31
		TP	*134*	2		1*22*	146	C	29, 31
11*13*5	Cauliflower, raw	H-ORAC ‡	833	65	6	610	11*13*	B	16, 17, 29, 31, 36
		L-ORAC ‡	37	65				B	16, 17, 29, 31, 36
		Total-ORAC	870	65	6	647	1150	B	16, 17, 29, 31, 36
		TP	93	8	27	63	274	B	16, 29, 31, 36
11143	Celery, raw	H-ORAC	512	15	42	261	837	A	11, 16, 36
		L-ORAC ‡	40	15	1	29	49	A	11, 16, 36
		Total-ORAC	552	15	43	289	878	A	11, 16, 36
		TP	42	12	7	15	86	A	16, 36
11156	Chives, raw	H-ORAC	2094	4	98	2094	2094	C	16
		Total-ORAC	2094	4	98	2094	2094	C	16
		TP	85	4	4	85	85	C	16
11165	Coriander (cilantro) leaves, raw	H-ORAC	5141	4	266	5141	5141	C	16
		Total-ORAC	5141	4	266	5141	5141	C	16
		TP	151	4	7	151	151	C	16
11170	Corn, sweet, yellow,	H-ORAC	361	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	canned, brine pack, regular pack, solids and liquids	L-ORAC	52	1				B	36
		Total-ORAC	*413*	1				B	36
		TP	169	1				B	36
11178	Corn, sweet, yellow, frozen, kernels cut off cob, unprepared	H-ORAC	447	1				B	36
		L-ORAC	75	1				B	36
		Total-ORAC	*522*	1				B	36
		TP	174	1				B	36
11167	Corn, sweet, yellow, raw	H-ORAC	593	1				B	36
		L-ORAC	*135*	1				B	36
		Total-ORAC	728	1				B	36
		TP	211	1				B	36
11206	Cucumber, peeled, raw	H-ORAC	126	4	19	94	171	A	36
		L-ORAC	14	4	5	6	24	A	36
		Total-ORAC	140	4	23	102	195	A	36
		TP	*22*	4	2	18	25	A	36
11205	Cucumber, with peel, raw	H-ORAC	203	15	17	89	*344*	A	11, 16, 36
		L-ORAC ‡	28	15	0	24	31	A	11, 16, 36
		Total-ORAC	232	15	17	*113*	372	A	11, 16, 36
		TP	29	12	2	20	37	A	16, 36
11210	Eggplant, boiled	H-ORAC	245	4	*13*	245	245	C	2
		Total-ORAC	245	4	*13*	245	245	C	2
		TP	21	4	1	21	21	C	2
11209	Eggplant, raw	H-ORAC	932	17	116	*344*	2509	B	2, 16, 36
		Total-ORAC	932	17	116	*344*	2509	B	2, 16, 36
		TP	63	17	12	29	252	B	2, 16, 36
11957	Fennel, bulb, raw	H-ORAC	307	8	11	252	361	C	16
		Total-ORAC	307	8	11	252	361	C	16
		TP	26	8	1	21	31	C	16
11215	Garlic, raw	H-ORAC	5541	12	450	*1370*	8200	B	11, 16, *13*
		L-ORAC	400	5	89	400	400	C	*13*
		Total-ORAC	5708	12	475	*1370*	8600	B	11, 16, *13*
		TP	92	4	4			C	16
11216	Ginger root, raw	H-ORAC	14840	4	530			C	16
		Total-ORAC	14840	4	530			C	16
		TP	*227*	4	10			C	16
11246	Leeks, (bulb and lower	H-ORAC	569	7	*22*	490	675	B	11, 16

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	leaf-portion), raw	Total-ORAC	569	7	*22*	490	675	B	11, 16
		TP	47	4	2			C	16
99112	Lemon balm, leaves, raw	H-ORAC	5997	4				C	16
		Total-ORAC	5997	4				C	16
		TP	490	4	20			C	16
11250	Lettuce, butterhead (includes boston and bibb types), raw	H-ORAC	*13*21	8	407	332	3633	A	36
		L-ORAC	103	8	20	46	211	A	36
		Total-ORAC	1423	8	426	382	3845	A	36
		TP	100	8	*22*	24	203	A	36
11251	Lettuce, cos or romaine, raw	H-ORAC	855	12	71	382	1244	A	16, 36
		L-ORAC ‡	162	12	14	87	282	A	16, 36
		Total-ORAC	1017	12	71	570	1428	A	16, 36
		TP	73	12	7	48	123	A	16, 36
11253	Lettuce, green leaf, raw	H-ORAC	*13*91	20	74	802	2127	A	16, 36
		L-ORAC ‡	141	20	4	111	183	A	16, 36
		Total-ORAC	1532	20	77	914	*22*68	A	16, 36
		TP	90	20	9	50	190	A	16, 36
11252	Lettuce, iceberg (includes crisphead types), raw	H-ORAC	406	7	120	87	758	A	36
		L-ORAC	33	7	4	20	50	A	36
		Total-ORAC	438	7	118	*13*7	784	A	36
		TP	50	7	11	21	97	A	36
11257	Lettuce, red leaf, raw	H-ORAC	*22*87	12	*22*9	1019	3323	A	16, 36
		L-ORAC ‡	*13*8	12	5	98	168	A	16, 36
		Total-ORAC	2426	12	*22*9	1161	*34*61	A	16, 36
		TP	111	12	8	74	175	A	16, 36
11987	Mushroom, oyster, raw	H-ORAC	596	3	26			C	7
		L-ORAC	68	3	0			C	7
		Total-ORAC	664	3	26			C	7
		TP	51	3	5			C	7
11266	Mushrooms, brown, Italian, or Crimini, raw	H-ORAC	900	3	50			C	7
		L-ORAC	51	3	3			C	7
		Total-ORAC	951	3	50			C	7
		TP	89	3	2			C	7
11993	Mushrooms, maitake, raw	H-ORAC	572	3	15			C	7
		L-ORAC	96	3	6			C	7
		Total-ORAC	669	3	15			C	7

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	71	3	1			C	7
11265	Mushrooms, portabella, raw	H-ORAC	919	3	40			C	7
		L-ORAC	49	3	0			C	7
		Total-ORAC	968	3	40			C	7
		TP	75	3	2			C	7
11268	Mushrooms, shiitake, dried	H-ORAC	668	3	31			C	7
		L-ORAC	84	3	0			C	7
		Total-ORAC	752	3	31			C	7
		TP	52	3	2			C	7
11260	Mushrooms, white, raw	H-ORAC	640	3	8			C	7
		L-ORAC	51	3	0			C	7
		Total-ORAC	691	3	8			C	7
		TP	64	3	2			C	7
11282	Onions, raw	H-ORAC	900	7	97	739	1442	A	11, 36
		L-ORAC ‡	12	7	1	9	16	A	11, 36
		Total-ORAC	9*13*	7	97	751	1457	A	11, 36
		TP	23	4	3	17	27	A	36
99055	Onions, red, raw	H-ORAC	1521	4	69			C	16
		Total-ORAC	1521	4	69			C	16
		TP	48	4	2	48	48	C	16
11294	Onions, sweet, raw	H-ORAC	594	8	28	491	695	A	36
		L-ORAC	21	8	3	5	33	A	36
		Total-ORAC	614	8	30	509	727	A	36
		TP	74	8	7	52	99	A	36
99056	Onions, white, raw	H-ORAC	863	37	15	*342*	926	B	16, 17
		Total-ORAC	863	37	15	*342*	926	B	16, 17
		TP	27	4	1	27	27	C	16
11286	Onions, yellow, sauteed	H-ORAC	1*22*0	4	99	996	*13*94	A	36
		Total-ORAC	1*22*0	4	99	996	*13*94	A	36
		TP	150	4	27	98	211	A	36
11297	Parsley, raw	H-ORAC	*13*01	4	66			C	16
		Total-ORAC	*13*01	4	66			C	16
		TP	77	4	3			C	16
1*13*12	Peas, green, frozen, unprepared	H-ORAC	505	1				B	36
		L-ORAC	95	1				B	36
		Total-ORAC	600	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	187	1				B	36
1*13*33	Peppers, sweet, green, raw	H-ORAC	921	61	*13*	384	1059	A	11, 16, 17, 36
		L-ORAC ‡	14	61	0	11	17	A	11, 16, 17, 36
		Total-ORAC	935	61	*13*	401	1072	A	11, 16, 17, 36
		TP	160	8	36	50	312	A	16, 36
1*13*39	Peppers, sweet, green, sauteed	H-ORAC	615	4	95	419	755	A	36
		Total-ORAC	615	4	95	419	755	A	36
		TP	437	4	63	328	570	A	36
99451	Peppers, sweet, orange, raw	H-ORAC	908	1				B	36
		L-ORAC	76	1				B	36
		Total-ORAC	984	1				B	36
		TP	543	1				B	36
11821	Peppers, sweet, red, raw	H-ORAC	797	29	11	748	1094	A	11, 16, 17, 36
		L-ORAC ‡	24	29	1	12	35	A	11, 16, 17, 36
		Total-ORAC	821	29	12	760	1129	A	11, 16, 17, 36
		TP	255	8	57	86	532	A	16, 36
11921	Peppers, sweet, red, sauteed	H-ORAC	847	4	103	700	1106	A	36
		Total-ORAC	847	4	103	700	1106	A	36
		TP	564	4	21	533	599	A	36
99440	Peppers, sweet, yellow, grilled	H-ORAC	694	4	41			C	2
		Total-ORAC	694	4	41			C	2
		TP	164	4	5			C	2
11951	Peppers, sweet, yellow, raw	H-ORAC	974	8	7	950	1011	B	11, 16, 36
		L-ORAC ‡	69	8				B	11, 16, 36
		Total-ORAC	1043	8	7	1019	1080	B	11, 16, 36
		TP	216	5	90	128	566	B	16, 36
1*13*58	Potatoes, red, flesh and skin, baked	H-ORAC	*13*04	8	68	1160	1666	A	36
		L-ORAC	*22*	8	3	12	35	A	36
		Total-ORAC	*13*26	8	70	1182	1701	A	36
		TP	179	8	*22*	110	260	A	36
1*13*55	Potatoes, red, flesh and skin, raw	H-ORAC	1060	4	78	948	1255	A	36
		L-ORAC	38	4	1	37	40	A	36
		Total-ORAC	1098	4	77	987	1292	A	36
		TP	*13*8	4	17	118	181	A	36
1*13*56	Potatoes, Russet, flesh and skin, baked	H-ORAC	1652	8	126	1280	2417	A	36
		L-ORAC	28	8	4	16	42	A	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		Total-ORAC	1680	8	127	*13*17	2453	A	36
		TP	176	8	6	159	208	A	36
1*13*53	Potatoes, russet, flesh and skin, raw	H-ORAC	1272	4	*13*2	1015	1541	A	36
		L-ORAC	51	4	8	31	62	A	36
		Total-ORAC	*1322*	4	*13*8	1046	1603	A	36
		TP	1*22*	4	*13*	91	146	A	36
1*13*57	Potatoes, white, flesh and skin, baked	H-ORAC	1098	7	111	789	1552	A	36
		L-ORAC	40	7	11	12	77	A	36
		Total-ORAC	1*13*8	7	104	866	1576	A	36
		TP	*13*6	7	24	41	*22*3	A	36
1*13*54	Potatoes, white, flesh and skin, raw	H-ORAC	1010	3	150	779	1195	A	36
		L-ORAC	49	3	9	35	60	A	36
		Total-ORAC	1058	3	158	814	1255	A	36
		TP	163	3	12	145	178	A	36
114*22*	Pumpkin, raw	H-ORAC	414	1				B	36
		L-ORAC	69	1				B	36
		Total-ORAC	483	1				B	36
		TP	157	1				B	36
11676	Radish seeds, sprouted, raw	H-ORAC	2184	4				C	2
		Total-ORAC	2184	4				C	2
		TP	100	4				C	2
11429	Radishes, raw	H-ORAC	1724	15	206	706	3602	A	16, 36
		L-ORAC ‡	26	15	2	11	45	A	16, 36
		Total-ORAC	1750	15	206	742	3628	A	16, 36
		TP	79	15	8	*34*	162	A	16, 36
11452	Soybeans, mature seeds, sprouted, raw	H-ORAC	962	4	45			C	2
		Total-ORAC	962	4	45			C	2
		TP	47	4	1			C	2
11463	Spinach, frozen, chopped or leaf, unprepared	H-ORAC	1687	4	65			C	2
		Total-ORAC	1687	4	65			C	2
		TP	91	4	4			C	2
11457	Spinach, raw	H-ORAC	15*13*	144	12	*13*07	2732	B	11, 16, 17, 19, 36
		Total-ORAC	15*13*	144	12	*13*07	2732	B	11, 16, 17, 19, 36
		TP	205	53	2	101	256	B	16, 19, 36
11477	Squash, summer, zucchini, includes skin,	H-ORAC	180	4	8			C	16
		Total-ORAC	180	4	8			C	16

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	raw	TP	26	4	2			C	16
11485	Squash, winter, butternut, raw	H-ORAC	396	4	21			C	16
		Total-ORAC	396	4	21			C	16
		TP	26	4	1			C	16
11508	Sweet potato, baked in skin	H-ORAC	2085	4	*213*	1535	*2322*	A	36
		L-ORAC	30	4	5	18	37	A	36
		Total-ORAC	2115	4	218	1552	2357	A	36
		TP	233	4	15	200	254	A	36
11510	Sweet potato, cooked, boiled, without skin	H-ORAC	729	4	118	488	967	A	36
		L-ORAC	37	4	18	14	82	A	36
		Total-ORAC	766	4	129	524	1049	A	36
		TP	120	4	16	95	156	A	36
11507	Sweet potato, raw	H-ORAC	858	4	66	756	1020	A	36
		L-ORAC	44	4	7	30	57	A	36
		Total-ORAC	902	4	72	786	1077	A	36
		TP	74	4	16	45	103	A	36
11540	Tomato juice, canned	H-ORAC	486	2		*343*	630	B	33, 36
		Total-ORAC	486	2		*343*	630	B	33, 36
		TP	323	1				B	36
11549	Tomato products, canned, sauce	H-ORAC	652	1				B	36
		L-ORAC	42	1				B	36
		Total-ORAC	694	1				B	36
		TP	177	1				B	36
99051	Tomatoes, plum, raw	H-ORAC	546	8	31	395	697	C	16
		Total-ORAC	546	8	31	395	697	C	16
		TP	36	8	0	35	36	C	16
11530	Tomatoes, red, ripe, cooked	H-ORAC	389	8	33	262	520	A	36
		L-ORAC ‡	*34*	8	1	27	41	A	36
		Total-ORAC	423	8	32	296	547	A	36
		TP	94	8	6	67	110	A	36
11529	Tomatoes, red, ripe, raw, year round average	H-ORAC	364	179	1	216	457	A	11, 17, 36
		L-ORAC ‡	23	179	0	15	31	A	11, 17, 36
		Total-ORAC	387	179	1	239	475	A	11, 17, 36
		TP	80	7	5	70	99	A	36
11578	Vegetable juice cocktail, canned	H-ORAC	548	1				B	36
		Total-ORAC	548	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		TP	244	1				B	36
	12 – Nuts and Seeds								
12061	Nuts, almonds	H-ORAC	4282	8	329	2800	5362	A	36
		L-ORAC	172	8	19	80	*227*	A	36
		Total-ORAC	4454	8	326	3005	5546	A	36
		TP	418	8	32	306	521	A	36
12078	Nuts, brazilnuts, dried, unblanched	H-ORAC	862	6	92	480	1052	A	36
		L-ORAC	557	6	97	231	773	A	36
		Total-ORAC	1419	6	172	711	1742	A	36
		TP	310	6	43	239	436	A	36
12087	Nuts, cashew nuts, raw	H-ORAC	1505	8	74	1297	1847	A	36
		L-ORAC	443	8	59	*225*	620	A	36
		Total-ORAC	1948	8	109	1606	24*34*	A	36
		TP	269	8	15	*234*	331	A	36
12120	Nuts, hazelnuts or filberts	H-ORAC	9275	8	672	5401	11561	A	36
		L-ORAC	370	8	100	187	961	A	36
		Total-ORAC	9645	8	594	6363	11778	A	36
		TP	835	8	82	430	1169	A	36
12*13*2	Nuts, macadamia nuts, dry roasted	H-ORAC	1443	8	87	1165	1924	A	36
		L-ORAC	252	8	*22*	171	331	A	36
		Total-ORAC	1695	8	99	*13*62	*22*16	A	36
		TP	156	8	11	116	208	A	36
12142	Nuts, pecans	H-ORAC	17524	8	392	16555	19631	A	36
		L-ORAC	416	8	37	283	606	A	36
		Total-ORAC	17940	8	398	16838	19991	A	36
		TP	2016	8	39	1887	2181	A	36
12147	Nuts, pine nuts, dried	H-ORAC	443	8	42	238	595	A	36
		L-ORAC ‡	277	8	17	174	321	A	36
		Total-ORAC	720	8	56	411	908	A	36
		TP	68	8	9	44	114	A	36
12151	Nuts, pistachio nuts, raw	H-ORAC	7295	8	462	5460	8971	A	*34*, 36
		L-ORAC	379	8	71	55	678	A	*34*, 36
		Total-ORAC	7675	8	510	5520	9649	A	*34*, 36
		TP	1657	7	50	1474	1783	A	36
12155	Nuts, walnuts, english	H-ORAC	*13*057	8	*133*0	8*22*3	17743	A	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		L-ORAC	484	8	47	357	678	A	36
		Total-ORAC	*13*541	8	*132*1	8872	18282	A	36
		TP	1556	8	154	1023	*22*69	A	36
	14 - Beverages								
14096	Alcoholic beverage, wine, table, red	H-ORAC	3607	44	145	2400	6380	B	6, 33, 26
		Total-ORAC	3607	44	145	2400	6380	B	6, 33, 26
		TP	*22*8	*34*	9	*13*0	350	B	6, 26
14097	Alcoholic Beverage, wine, table, red, Cabernet Sauvignon	H-ORAC	4523	14	290	2650	6380	B	6, 26
		Total-ORAC	4523	14	290	2650	6380	B	6, 26
		TP	203	11	8	143	243	B	6
14602	Alcoholic Beverage, wine, table, red, Merlot	H-ORAC	2670	3	202	2670	2670	C	26
		Total-ORAC	2670	3	202	2670	2670	C	26
14102	Alcoholic Beverage, wine, table, red, Zinfandel	H-ORAC	2400	3	115	2400	2400	B	26
		Total-ORAC	2400	3	115	2400	2400	B	26
99439	Alcoholic beverage, wine, table, rose	H-ORAC	1005	3	80	895	1120	C	6
		Total-ORAC	1005	3	80	895	1120	C	6
		TP	42	3	2	39	44	C	6
14106	Alcoholic beverage, wine, table, white	H-ORAC	392	12	11	318	484	B	6, 33
		Total-ORAC	392	12	11	318	484	B	6, 33
		TP	20	2	2	19	21	C	6
14181	Chocolate syrup	Total-ORAC	6330	3	357	5750	6670	C	15
		TP	417	3	41	366	479	C	15
14192	Cocoa mix, powder	H-ORAC	485	2				C	33
		Total-ORAC	485	2				C	33
99*34*1	Tea, black, ready-to-drink, plain and flavored	H-ORAC	3*13*	9	42	170	590	B	26
		Total-ORAC	3*13*	9	42	170	590	B	26
14355	Tea, brewed, prepared with tap water	H-ORAC	1128	1				C	33
		Total-ORAC	1128	1				C	33
99070	Tea, green, brewed	H-ORAC	1253	1				C	33
		Total-ORAC	1253	1				C	33
99*34*3	Tea, green, ready-to-drink	H-ORAC	520	11	24	320	610	B	26
		Total-ORAC	520	11	24	320	610	B	26
99582	Tea, white, ready-to-drink	H-ORAC	264	7	46	100	480	B	26
		Total-ORAC	264	7	46	100	480	B	26
	16 – Legume and Legume Products								

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
16016	Beans, black turtle soup, mature seeds, raw	H-ORAC	6416	6	562	4430	8402	C	40
		Total-ORAC	6416	6	562	4430	8402	C	40
		TP	469	6	46	305	633	C	40
16015	Beans, black, mature seeds, boiled	H-ORAC	*2249*	4	731	567	3640	B	39
		Total-ORAC	*2249*	4	731	567	3640	B	39
		TP	112	4	14	90	*135*	B	39
16014	Beans, black, mature seeds, raw	H-ORAC	8047	2		7593	8501	B	36, 39
		L-ORAC ‡	447	2		447	447	B	36, 39
		Total-ORAC	8494	2		8040	8948	B	36, 39
		TP	885	2		880	889	B	36, 39
16032	Beans, kidney, red, mature seeds, raw	H-ORAC	8410	8	1291	6371	14539	B	36, 40
		L-ORAC ‡	196	8	38	9	382	A	36, 40
		Total-ORAC	8606	8	1292	6566	14921	B	36, 40
		TP	637	8	124	368	1247	B	36, 40
16037	Beans, navy, mature seeds, raw	H-ORAC	1406	4	215	1202	2019	B	36, 40
		L-ORAC ‡	454	4	1000	454	454	B	36, 40
		Total-ORAC	1861	4	216	1656	2474	B	36, 40
		TP	94	4	45	52	*223*	B	36, 40
16040	Beans, pink, mature seeds, raw	H-ORAC	8320	3	102	8320	8320	C	40
		Total-ORAC	8320	3	102	8320	8320	C	40
		TP	*345*	3	10	*345*	*345*	C	40
16043	Beans, pinto, mature seeds, boiled	H-ORAC	846	4	325	368	1462	A	36
		L-ORAC	57	4	4	50	66	A	36
		Total-ORAC	904	4	327	418	1527	A	36
		TP	128	4	*13*	96	149	A	36
16042	Beans, pinto, mature seeds, raw	H-ORAC	7610	5	1748	4637	12465	B	36, 40
		L-ORAC ‡	423	5	5	409	437	A	36, 40
		Total-ORAC	8033	5	1749	5060	12902	B	36, 40
		TP	618	5	163	*341*	1052	B	36, 40
16056	Chickpeas (garbanzo beans, bengal gram), mature seeds, raw	H-ORAC	847	3	29	847	847	C	40
		Total-ORAC	847	3	29	847	847	C	40
		TP	90	3	1	90	90	C	40
16062	Cowpeas, common (blackeyes, crowder, southern), mature	H-ORAC	3707	1				B	36
		L-ORAC	636	1				B	36
		Total-ORAC	*4343*	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	seeds, raw	TP	647	1				B	36
16069	Lentils, raw	H-ORAC	7282	33	94	5357	8*613*	B	40
		Total-ORAC	7282	33	94	5357	8*613*	B	40
		TP	628	33	12	431	869	B	40
16098	Peanut butter, smooth style	H-ORAC	3127	3	355			B	36
		L-ORAC	305	3	40			B	36
		Total-ORAC	*34*32	3				B	36
		TP	536	3	25			B	36
16087	Peanuts, all types, raw	H-ORAC	2893	4	*13*6	2684	3177	A	36
		L-ORAC	273	4	60	196	420	A	36
		Total-ORAC	3166	4	*13*5	2886	*34*53	A	36
		TP	396	4	31	324	450	A	36
16085	Peas, split, mature seeds, raw	H-ORAC	524	33	24	153	877	B	40
		Total-ORAC	524	33	24	153	877	B	40
		TP	74	33	1	57	90	B	40
99457	Peas, yellow, mature seeds, raw	H-ORAC	741	30	*34*	283	1144	B	40
		Total-ORAC	741	30	*34*	283	1144	B	40
		TP	83	30	1	75	99	B	40
16108	Soybeans, mature seeds, raw	H-ORAC	5409	40	*34*1	1950	12351	B	3*8*, 40
		Total-ORAC	5409	40	*34*1	1950	12351	B	3*8*, 40
		TP	266	40	23	145	852	B	3*8*, 40
	18 – Baked Products								
99449	Bread, butternut whole grain	H-ORAC	1986	1				B	36
		L-ORAC	118	1				B	36
		Total-ORAC	2104	1				B	36
		TP	246	1				B	36
18035	Bread, Multi-Grain (includes whole-grain)	H-ORAC	1298	1				B	36
		L-ORAC	123	1				B	36
		Total-ORAC	1421	1				B	36
		TP	171	1				B	36
99448	Bread, Oatnut	H-ORAC	1*224*	1				B	36
		L-ORAC	94	1				B	36
		Total-ORAC	*13*18	1				B	36
		TP	183	1				B	36
18044	Bread, pumpernickel	H-ORAC	1835	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		L-ORAC	128	1				B	36
		Total-ORAC	1963	1				B	36
		TP	271	1				B	36
	19 - Sweets								
19078	Baking chocolate, unsweetened, squares	H-ORAC ‡	49093	12	7554	19100	104*322*	A	9, 15, 36
		L-ORAC ‡	850	12	30	670	1100	A	9, 15, 36
		Total-ORAC	49944	12	7539	20200	105160	B	9, 15, 36
		TP	3580	6	545	2691	5177	B	15, 36
99412	Candies, chocolate, dark	Total-ORAC	20816	14	551	15170	24600	B	9, 15
		TP	1297	9	30	1173	1488	B	15
19120	Candies, milk chocolate	H-ORAC ‡	6612	10	567	3204	9249	A	9, 15, 36
		L-ORAC ‡	907	10	63	670	1208	A	9, 15, 36
		Total-ORAC	7519	10	593	4170	10430	B	9, 15, 36
		TP	477	7	58	317	696	A	15, 36
19080	Candies, semisweet chocolate	Total-ORAC	18053	9	152	17400	19030	B	15
		TP	1238	9	10	1176	1288	B	15
99445	Chocolate, dutched powder	H-ORAC	39900	2				C	9
		L-ORAC	300	2				C	9
		Total-ORAC	40200	2				C	9
19165	Cocoa, dry powder, unsweetened	Total-ORAC	55653	32	4011	9400	87500	B	9, 15, 14
		TP	3663	29	325	766	6320	B	15, 14
19353	Syrups, maple	H-ORAC	590	45	17	390	1260	B	*8*
		Total-ORAC	590	45	17	390	1260	B	*8*
	20 – Cereal Grains and Pasta								
20060	Rice bran, crude	H-ORAC	8817	1				B	36
		L-ORAC	15470	1				B	36
		Total-ORAC	24287	1				B	36
		TP	667	1				B	36
99465	Sorghum, bran, black	H-ORAC	97000	2				C	1
		L-ORAC	3800	2				C	1
		Total-ORAC	100800	2				C	1
		TP	2600	2				C	1
99467	Sorghum, bran, hi-tannin	Total-ORAC	240000	2				C	1
99464	Sorghum, bran, red	H-ORAC	70400	2				C	1

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
		L-ORAC	700	2				C	1
		Total-ORAC	71000	2				C	1
		TP	2000	2				C	1
99466	Sorghum, bran, white	Total-ORAC	6400	2				C	1
99462	Sorghum, grain, black	H-ORAC	20500	2				C	1
		L-ORAC	1400	2				C	1
		Total-ORAC	21900	2				C	1
		TP	600	2				C	1
99463	Sorghum, grain, hi-tannin	H-ORAC	44000	2				C	1
		L-ORAC	1400	2				C	1
		Total-ORAC	45400	2				C	1
		TP	*13*00	2				C	1
99461	Sorghum, grain, red	H-ORAC	*13*600	2				C	1
		L-ORAC	400	2				C	1
		Total-ORAC	14000	2				C	1
		TP	500	2				C	1
99460	Sorghum, grain, white	H-ORAC	2100	2				C	1
		L-ORAC	100	2				C	1
		Total-ORAC	*22*00	2				C	1
		TP	100	2				C	1
99459	Sumac, bran, raw	H-ORAC	309900	2				C	1
		L-ORAC	2500	2				C	1
		Total-ORAC	312400	2				C	1
		TP	6600	2				C	1
99458	Sumac, grain, raw	H-ORAC	85300	2				C	1
		L-ORAC	1500	2				C	1
		Total-ORAC	86800	2				C	1
		TP	2300	2				C	1
	25 - Snacks								
1903*4*	Snacks, popcorn, air-popped	H-ORAC	1535	1				B	36
		L-ORAC	208	1				B	36
		Total-ORAC	1743	1				B	36
		TP	117	1				B	36
97089	Snacks, tortilla chips, low fat, made with	H-ORAC	1486	1				B	36
		L-ORAC	64	1				B	36

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(H-ORAC, L-ORAC, Total ORAC µmol TE/100 g and TP mg GAE/100 g)

NDB No.	Description	Parameter	Mean	N	SEM	Min	Max	QC	Reference No. *
	olestra	Total-ORAC	1549	1				B	36
		TP	278	1				B	36
19444	Snacks, tortilla chips, low fat, made with olestra, nacho cheese	H-ORAC	1733	1				B	36
		L-ORAC	125	1				B	36
		Total-ORAC	1858	1				B	36
		TP	329	1				B	36
	35 – Ethnic Foods								
35193	Agave, cooked (Southwest)	H-ORAC	2938	1				B	36
		L-ORAC	*13*6	1				B	36
		Total-ORAC	3074	1				B	36
		TP	376	1				B	36
35194	Agave, dried (Southwest)	H-ORAC	7274	1				B	36
		L-ORAC	250	1				B	36
		Total-ORAC	7524	1				B	36
		TP	*13*59	1				B	36
35192	Agave, raw (Southwest)	H-ORAC	1247	1				B	36
		L-ORAC	47	1				B	36
		Total-ORAC	1294	1				B	36
		TP	87	1				B	36
35*13*3	Chilchen (Red Berry Beverage) (Navajo)	H-ORAC	740	1				B	36
		Total-ORAC	740	1				B	36
		TP	20	1				B	36
35*13*0	Mush, blue corn with ash (Navajo)	H-ORAC	684	1				B	36
		Total-ORAC	684	1				B	36
		TP	77	1				B	36

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