

Table 1 Polyphenol and antioxidant content in the 100 richest foods (mg per 100 g or mg per 100 ml)

From: [Identification of the 100 richest dietary sources of polyphenols: an application of the Phenol-Explorer database](#)

| <i>Food</i> | <i>Food group</i> | <i>Polyphenols</i> ^a | | <i>Polyphenols AE</i> ^a | | <i>Antioxidants</i> ^b | |
|------------------------|-------------------|---------------------------------|-------------|------------------------------------|-------------|----------------------------------|-------------|
| | | <i>Content</i> | <i>Rank</i> | <i>Content</i> | <i>Rank</i> | <i>Content</i> | <i>Rank</i> |
| Cloves | Seasonings | 15 188 | 1 | 15 188 | 1 | 16 047 | 1 |
| Peppermint, dried | Seasonings | 11 960 | 2 | 7 920 | 2 | 980 | 26 |
| Star anise | Seasonings | 5 460 | 3 | 5 460 | 3 | 1 810 | 16 |
| Cocoa powder | Cocoa products | 3 448 | 4 | 3 294 | 4 | 1 104 | 24 |
| Mexican oregano, dried | Seasonings | 2 319 | 5 | 2 137 | 5 | — | — |
| Celery seed | Seasonings | 2 094 | 6 | 1 007 | 10 | — | — |
| Black chokeberry | Fruits | 1 756 | 7 | 1 432 | 7 | 1 752 | 17 |
| Dark chocolate | Cocoa products | 1 664 | 8 | 1 618 | 6 | 1 860 | 13 |

| | | | | | | | |
|-----------------------|------------|-------------------|----|-------------------|----|------|----|
| Flaxseed meal | Seeds | 1528 ^c | 9 | 1220 ^c | 8 | — | — |
| Black elderberry | Fruits | 1359 | 10 | 804 | 13 | 1950 | 12 |
| Chestnut | Seeds | 1215 | 11 | 1215 | 9 | 2757 | 9 |
| Common sage, dried | Seasonings | 1207 | 12 | 893 | 12 | 2920 | 8 |
| Rosemary, dried | Seasonings | 1018 | 13 | 522 | 14 | 2519 | 10 |
| Spearmint, dried | Seasonings | 956 | 14 | 491 | 18 | 6575 | 3 |
| Common thyme, dried | Seasonings | 878 | 15 | 464 | 19 | 1815 | 15 |
| Lowbush blueberry | Fruits | 836 | 16 | 496 | 15 | 471 | 35 |
| Blackcurrant | Fruits | 758 | 17 | 464 | 20 | 821 | 29 |
| Capers | Seasonings | 654 | 18 | 389 | 21 | 3600 | 6 |
| Black olive | Vegetables | 569 | 19 | 320 | 22 | 117 | 53 |
| Highbush blueberry | Fruits | 560 | 20 | 295 | 23 | 205 | 40 |
| Hazelnut | Seeds | 495 | 21 | 493 | 16 | 687 | 30 |
| Pecan nut | Seeds | 493 | 22 | 493 | 17 | 1816 | 14 |
| Soy flour | Seeds | 466 | 23 | 267 | 27 | — | — |
| Plum | Fruits | 377 | 24 | 285 | 24 | 411 | 35 |
| Green olive | Vegetables | 346 | 25 | 233 | 28 | 161 | 47 |
| Sweet basil, dried | Seasonings | 322 | 26 | 166 | 34 | 4317 | 4 |
| Curry, powder | Seasonings | 285 | 27 | 285 | 25 | 1075 | 25 |
| Sweet cherry | Fruits | 274 | 28 | 145 | 38 | 144 | 48 |
| Globe artichoke heads | Vegetables | 260 | 29 | 154 | 35 | 1142 | 23 |
| Blackberry | Fruits | 260 | 30 | 180 | 33 | 570 | 31 |
| Roasted soybean | Seeds | 246 | 31 | 153 | 36 | — | — |

| | | | | | | | |
|------------------------------|-------------------------|------------------|----|------------------|----|------|----|
| Milk chocolate | Cocoa products | 236 | 32 | 236 | 27 | 854 | 28 |
| Strawberry | Fruits | 235 | 33 | 205 | 29 | 268 | 36 |
| Red chicory | Vegetables | 235 | 34 | 131 | 41 | 129 | 51 |
| Red raspberry | Fruits | 215 | 35 | 107 | 46 | 980 | 27 |
| Coffee, filter | Non-alcoholic beverages | 214 | 36 | 110 | 45 | 267 | 37 |
| Ginger, dried | Seasonings | 202 | 37 | 202 | 30 | 473 | 32 |
| Whole grain hard wheat flour | Cereals | 201 ^c | 38 | 201 ^c | 21 | 186 | 46 |
| Prune | Fruits | 194 | 39 | 100 | 49 | 1195 | 21 |
| Almond | Seeds | 187 | 40 | 185 | 32 | 191 | 45 |
| Black grape | Fruits | 169 | 41 | 124 | 42 | 205 | 41 |
| Red onion | Vegetables | 168 | 42 | 99 | 50 | 91 | 60 |
| Green chicory | Vegetables | 166 | 43 | 117 | 44 | — | — |
| Common thyme, fresh | Seasonings | 163 | 44 | 118 | 43 | 1173 | 23 |
| Refined maize flour | Cereals | 153 ^c | 45 | 153 ^c | 37 | 102 | 59 |
| Soy, tempeh | Seeds | 148 | 46 | 101 | 48 | — | — |
| Whole grain rye flour | Cereals | 143 ^c | 47 | 143 ^c | 39 | 72 | 66 |
| Apple | Fruits | 136 | 48 | 136 | 40 | 205 | 42 |
| Spinach | Vegetables | 119 | 49 | 68 | 55 | 248 | 38 |
| Shallot | Vegetables | 113 | 50 | 67 | 56 | 115 | 54 |
| Lemon verbena, dried | Seasonings | 106 | 51 | 106 | 47 | — | — |
| Black tea | Non-alcoholic beverages | 102 | 52 | 90 | 52 | 104 | 58 |
| Red wine | Alcoholic beverages | 101 | 53 | 91 | 51 | 215 | 39 |
| Green tea | Non-alcoholic beverages | 89 | 54 | 82 | 53 | 62 | 67 |

| | | | | | | | |
|-------------------------|-------------------------|-----------------|----|-----------------|----|------|----|
| Soy yogurt | Seeds | 84 | 55 | 51 | 60 | — | — |
| Yellow onion | Vegetables | 74 | 56 | 49 | 61 | 75 | 64 |
| Soy meat | Seeds | 73 | 57 | 47 | 63 | — | — |
| Whole grain wheat flour | Cereals | 71 ^c | 58 | 71 ^c | 54 | 90 | 61 |
| Pure apple juice | Non-alcoholic beverages | 68 | 59 | 61 | 57 | 34 | 75 |
| Pure pomegranate juice | Non-alcoholic beverages | 66 | 60 | 37 | 64 | 204 | 43 |
| Extra-virgin olive oil | Oils | 62 | 61 | 33 | 67 | 55 | 70 |
| Black bean | Seeds | 59 | 62 | 36 | 66 | 1390 | 20 |
| Peach | Fruits | 59 | 63 | 54 | 59 | 107 | 57 |
| Pure blood orange juice | Non-alcoholic beverages | 56 | 64 | 28 | 71 | 72 | 67 |
| Cumin | Seasonings | 55 | 65 | 55 | 58 | 2038 | 11 |
| Pure grapefruit juice | Non-alcoholic beverages | 53 | 66 | 23 | 76 | 54 | 72 |
| White bean | Seeds | 51 | 67 | 31 | 69 | 138 | 49 |
| Chinese cinnamon | Seasonings | 48 | 68 | 48 | 62 | — | — |
| Pure blond orange juice | Non-alcoholic beverages | 46 | 69 | 20 | 81 | — | — |
| Broccoli | Vegetables | 45 | 70 | 21 | 79 | 198 | 44 |
| Redcurrant | Fruits | 43 | 71 | 23 | 77 | 448 | 36 |
| Soy tofu | Seeds | 42 | 72 | 25 | 74 | — | — |
| Pure lemon juice | Non-alcoholic beverages | 42 | 73 | 20 | 82 | — | — |
| Whole grain oat flour | Cereals | 37 ^c | 74 | 37 ^c | 65 | 82 | 65 |
| Apricot | Fruits | 34 | 75 | 15 | 85 | 133 | 53 |
| Caraway | Seasonings | 33 | 76 | 33 | 68 | 2913 | 7 |
| Refined rye flour | Cereals | 31 ^c | 77 | 31 ^c | 70 | 45 | 74 |

| | | | | | | | |
|------------------------------|-------------------------|----|-----|-----|-----|-------|----|
| Asparagus | Vegetables | 29 | 78 | 11 | 90 | 75 | 65 |
| Walnut | Seeds | 28 | 79 | 28 | 71 | 1576 | 19 |
| Potato | Vegetables | 28 | 80 | 15 | 86 | 54 | 73 |
| Ceylan cinnamon | Seasonings | 27 | 81 | 27 | 73 | 9070 | 2 |
| Parsley, dried | Seasonings | 25 | 82 | 25 | 75 | 1584 | 18 |
| Nectarine | Fruits | 25 | 83 | 20 | 83 | 55 | 71 |
| Curly endive | Vegetables | 24 | 84 | 15 | 87 | — | — |
| Marjoram, dried | Seasonings | 23 | 85 | 22 | 78 | 3,846 | 5 |
| Red lettuce | Vegetables | 23 | 86 | 14 | 88 | 114 | 58 |
| Chocolate beverage with milk | Non-alcoholic beverages | 21 | 87 | 21 | 80 | — | — |
| Quince | Fruits | 19 | 88 | 12 | 89 | — | — |
| Endive (Escarole) | Vegetables | 18 | 89 | 11 | 91 | — | — |
| Soy milk | Non-alcoholic beverages | 18 | 90 | 11 | 92 | — | — |
| Pure pummelo juice | Non-alcoholic beverages | 18 | 91 | 7.9 | 97 | — | — |
| Rapeseed oil | Oils | 17 | 92 | 17 | 84 | 18 | 78 |
| Pear | Fruits | 17 | 93 | 11 | 93 | 108 | 59 |
| Soybean sprout | Seeds | 15 | 94 | 10 | 95 | — | — |
| Green grape | Fruits | 15 | 95 | 7.6 | 98 | 122 | 55 |
| Carrot | Vegetables | 14 | 96 | 6.6 | 100 | 58 | 71 |
| Vinegar | Seasonings | 13 | 97 | 11 | 94 | — | — |
| Soy cheese | Seeds | 12 | 98 | 7.6 | 99 | — | — |
| White wine | Alcoholic beverages | 10 | 99 | 8.6 | 96 | 32 | 77 |
| Rosé wine | Alcoholic beverages | 10 | 100 | 7.8 | 98 | 82 | 63 |

1. Abbreviation: AE, (polyphenols as) aglycone equivalents.
2. ^a Sum of the content of individual polyphenols as determined by chromatography and of proanthocyanidin oligomers as determined by direct-phase high-performance liquid chromatography.
3. ^b Determined by the Folin assay. Some foods with a high antioxidant content as determined by the Folin assay are not included in the table due the absence of documented data on their polyphenol content as obtained by chromatography. Their antioxidant contents are as follows: lentils (6553 mg/100 g), dried oregano (5452 mg/100 g), dried summer savory (4512 mg/100 g), dried sweet bay (4170 mg/100 g), dried camomile (2483 mg/100 g), dried coriander (2260 mg/100 g), fenugreek (2250 mg/100 g), dried winter savory (1880 mg/100 g), pistachio (1490 mg/100 g), hyssop (1623 mg/100 g), red swiss chard leaves (1320 mg/100 g), dried dill (1250 mg/100 g), raisin (1065 mg/100 g), broad bean seeds (1039 mg/100 g), black pepper spice (1000 mg/100 g), fresh peppermint (980 mg/100 g), black raspberry (980 mg/100 g), fig (960 mg/100 g), fresh oregano (953 mg/100 g), fresh lemon balm (900 mg/100 g), fenugreek seed (830 mg/100 g), white swiss chard leaves (830 mg/100 g), white pepper spice (780 mg/100 g), fresh tarragon (570 mg/100 g), peanut butter (536 mg/100 g), bilberry (525 mg/100 g), dried date (488 mg/100 g), green pepper spice (380 mg/100 g).
4. ^c Polyphenol content determined by chromatography after hydrolysis of the glycosides and esters.

[Back to article page >](#)

European Journal of Clinical Nutrition ISSN 1476-5640 (online)