Appendix 21

Database Completeness

Missing nutrient values for foods are kept to a minimum in the NCC Food and Nutrient Database by gathering analytic food composition data from a variety of sources and imputing values following standardized procedures.

A missing nutrient value is allowed only if:

- The amount of that nutrient in the food is believed to be negligible
- The food is usually eaten in small amounts
- It is unknown whether the nutrient exists in the food
- It is not possible to estimate the value because the food is unlike any other.

The following table shows the percent of core foods in the 2026 version of the NCC Food and Nutrient Database with values provided for various nutrients and food components ('Complete' column). *** For example, the table shows that energy values are provided for all (100%) of the core foods in the database.*

The table also indicates the percentage of foods with values that were imputed ('Estimated' column). *** For example, the table shows that energy values were estimated for 6% of the core foods in the database.*

In future database versions estimated values will be replaced by analytic values as they become available.

Nutrient Name	Percent Complete	Percent Estimated
Primary Energy Sources		
Energy (kilocalories)	100	6
Total Fat	100	4
Total Carbohydrate	100	4
Available Carbohydrate	100	96
Total Protein	100	3
Animal Protein	100	51
Vegetable Protein	100	65
Gluten	100	55
Alcohol	100	0
Fat and Cholesterol		
Cholesterol	100	6
Solid Fats	100	46
Total Saturated Fatty Acids (SFA)	100	22
Total Monounsaturated Fatty Acids (MUFA)	100	23

Nutrient Name	Percent Complete	Percent Estimated
Total Polyunsaturated Fatty Acids (PUFA)	100	22
Total *Trans*-Fatty Acids (TRANS)	100	29
Total Conjugated Linoleic Acid (CLA 18:2)	100	23
Carbohydrates		
Total Sugars	100	26
Fructose	99	42
Galactose	99	40
Glucose	99	42
Lactose	100	47
Maltose	100	40
Sucrose	99	42
Starch	100	45
Added Sugars (by Total Sugars)	100	18
Added Sugars (by Available Carbohydrate)	100	23
Fiber		
Total Dietary Fiber	100	7
Soluble Dietary Fiber	99	57
Insoluble Dietary Fiber	99	60
Pectins	92	56
Vitamins		
Total Vitamin A Activity (International Units)	100	12
Beta-Carotene Equivalents (derived from provitamin A carotenoids)	100	89
Retinol	100	23
Vitamin D (calciferol)	100	9
Vitamin D2 (ergocalciferol)	100	73
Vitamin D3 (cholecalciferol)	100	66
Vitamin E (International Units)	100	90
Vitamin E (Total Alpha-Tocopherol)	100	30
Natural Alpha-Tocopherol (RRR-alpha-tocopherol or d-alpha-tocopherol)	100	91
Synthetic Alpha-Tocopherol (all rac-alpha-tocopherol or dl-alpha-tocopherol)	100	4
Total Alpha-Tocopherol Equivalents	100	88
Beta-Tocopherol	100	41
Gamma-Tocopherol	100	42

Nutrient Name	Percent Complete	Percent Estimated
Delta-Tocopherol	100	42
Vitamin K (phylloquinone)	100	17
Vitamin C (ascorbic acid)	100	5
Thiamin (vitamin B1)	100	4
Riboflavin (vitamin B2)	100	4
Niacin (vitamin B3)	100	4
Pantothenic Acid	99	13
Vitamin B6 (pyridoxine, pyridoxyl, and pyridoxamine)	100	6
Total Folate	100	10
Dietary Folate Equivalents	100	17
Natural Folate (food folate)	100	17
Synthetic Folate (folic acid)	100	4
Vitamin B12 (cobalamin)	100	7
Carotenoids		
Beta-Carotene (provitamin A carotenoid)	100	17
Alpha-Carotene (provitamin A carotenoid)	100	14
Beta-Cryptoxanthin (provitamin A carotenoid)	100	14
Lutein+Zeaxanthin	100	14
Lycopene	100	13
Minerals		
Calcium	100	2
Phosphorus	100	4
Magnesium	100	5
Iron	100	2
Heme Iron	100	22
Non-heme Iron	100	99
Zinc	100	6
Copper	100	6
Manganese	100	13
Selenium	100	9
Sodium	100	3
Potassium	100	3

Nutrient Name	Percent Complete	Percent Estimated
Fatty Acids		
SFA 4:0 (butyric acid)	100	19
SFA 6:0 (caproic acid)	100	19
SFA 8:0 (caprylic acid)	100	19
SFA 10:0 (capric acid)	100	20
SFA 12:0 (lauric acid)	100	21
SFA 14:0 (myristic acid)	100	22
SFA 16:0 (palmitic acid)	100	23
SFA 17:0 (margaric acid)	100	30
SFA 18:0 (stearic acid)	100	23
SFA 20:0 (arachidic acid)	100	29
SFA 22:0 (behenic acid)	100	29
MUFA 14:1 (myristoleic acid)	100	29
MUFA 16:1 (palmitoleic acid)	100	23
MUFA 18:1 (oleic acid)	100	24
MUFA 20:1 (gadoleic acid)	100	21
MUFA 22:1 (erucic acid)	100	21
PUFA 18:2 (linoleic acid, undifferentiated)	100	23
PUFA 18:2 n-6 (linoleic acid [LA])	100	43
PUFA 18:3 (linolenic acid, undifferentiated)	100	25
PUFA 18:3 n-3 (alpha-linolenic acid [ALA])	100	62
PUFA 18:3 n-6 (gamma-linolenic acid [GLA])	100	30
PUFA 18:4 (parinaric acid)	100	18
PUFA 20:4 (arachidonic acid, undifferentiated)	100	19
PUFA 20:4 n-6 (arachidonic acid [AA])	100	76
PUFA 20:5 n-3 (eicosapentaenoic acid [EPA])	100	18
PUFA 22:5 n-3 (docosapentaenoic acid [DPA])	100	19
PUFA 22:6 n-3 (docosahexaenoic acid [DHA])	100	17
TRANS 16:1 (*trans*-hexadecenoic acid)	100	48
TRANS 18:1 (*trans*-octadecenoic acid)	100	46
TRANS 18:2 (*trans*-octadecadienoic acid)	100	47
CLA cis-9, trans-11	100	36
CLA trans-10, cis-12	100	48

Nutrient Name	Percent Complete	Percent Estimated
Amino Acids		
Tryptophan	99	38
Threonine	99	38
Isoleucine	99	38
Leucine	99	38
Lysine	99	38
Methionine	99	38
Cystine	99	38
Phenylalanine	99	38
Tyrosine	99	38
Valine	99	38
Arginine	99	38
Histidine	99	38
Alanine	99	39
Aspartic Acid	99	39
Glutamic Acid	99	39
Glycine	99	39
Proline	99	39
Serine	99	39
Isoflavones and Similar		
Daidzein	100	12
Genistein	100	12
Glycitein	100	11
Coumestrol	100	11
Biochanin A	100	11
Formononetin	100	11
Total Lignans	100	35
Secoisolariciresinol	100	31
Matairesinol	100	31
Lariciresinol	100	32
Pinoresinol	100	32
Sugar Alcohols (polyols)		
Erythritol	100	2
Inositol	100	24
Isomalt	100	1

Nutrient Name	Percent Complete	Percent Estimated
Lactitol	100	1
Maltitol	100	1
Mannitol	100	13
Pinitol	100	3
Sorbitol	100	14
Xylitol	100	12
Other Food Components		
Acesulfame Potassium	100	0
Aspartame	100	1
Saccharin	100	1
Sucralose	100	0
Tagatose	100	3
Caffeine	100	1
Phytic Acid	100	30
Oxalic Acid	100	28
3-Methylhistidine	100	8
Sucrose Polyester	100	0
Choline	100	21
Betaine	100	57
Glycemic Index (glucose reference)	100	35
Glycemic Index (bread reference)	100	35
Nitrogen	100	1
Ash	100	8
Water	100	16