

NATURAL HEALTH PRODUCT

ANTIOXIDANTS

This monograph is intended to serve as a guide to industry for the preparation of Product Licence Applications (PLAs) and labels for natural health product market authorization. It is not intended to be a comprehensive review of the medicinal ingredients.

Notes

- ► Text in parentheses is additional optional information which can be included on the PLA and product label at the applicant's discretion.
- ► The solidus (/) indicates that the terms and/or statements are synonymous. Either term or statement may be selected by the applicant.
- ▶ When "Fruit" is indicated as source material, it only includes the parts of the fruit that are consumed historically as human food.
- This monograph may be used to support single ingredient or multi-ingredient products containing any medicinal ingredient from Table 1. Combination restrictions are described in the 'Ingredient Combinations' section.

Date July 28, 2022

Proper name(s), **Common name**(s), **Source information**

		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
 (±)-1,2- Dithiolane-3- pentanoic acid DL-alpha-Lipoic acid 	 DL-alpha-Lipoic acid DL-Thioctic acid 	DL-alpha-Lipoic acid	N/A	N/A	N/A	Synthetic		
(1E,6E)-1,7-Bis(4- hydroxy-3- methoxyphenyl)- 1,6-heptadiene-3,5- dione	Curcumin	N/A	N/A	Curcuma longa	Rhizome	Isolate		
 2-(3,4- Dihydroxyphenyl) -3,5,7- trihydroxy-4H-1- benzopyran-4-one 2-(3,4- dihydroxyphenyl) 	 Quercetin Quercetin anhydrous 	 Citrus bioflavonoids Quercetin Quercetin dihydrate 	N/A	N/A	N/A	 Isolate Synthetic 		

Table 1. Proper name(s), Common name(s), Source information

Antioxidants Page 1 of 99 Canada



	Common name(s)	Source information						
Proper name(s)		Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
 -3,5,7- trihydroxychrome n-4-one 3,3',4',5,7- Pentahydroxyflav one 2,5-Cyclohexadiene- 	Coonzume 010	N/A	N/A	 Agrobacterium 	Whole	Biosynthesis		
2,5-Cyclonexadiene- 1,4-dione, 2- [(2 <i>E</i> ,6 <i>E</i> ,10 <i>E</i> ,14 <i>E</i> ,18 <i>E</i> ,22 <i>E</i> ,26 <i>E</i> ,30 <i>E</i> ,34 <i>E</i>) -3,7,11,15,19,23,27, 31,35,39- decamethyl- 2,6,10,14,18,22,26, 30,34,38- tetracontadecaenyl]- 5,6-dimethoxy-3- methyl	CoQ10Ubidecarenone			 rhizogenes Agrobacterium tumefaciens Aspergillus clavatus Escherichia coli Gluconobacter suboxydans Leucosporidiu m scotti Paracoccus denitrificans Rhodobacter sphaeroides Rhodospirillum rubrum Saccharomyces cerevisiae Schizosaccharo myces pombe 				
		Coenzyme Q10	N/A	N/A	N/A	Synthetic		
(2S)-7-[[6-O-(6- Deoxy-alpha-L- mannopyranosyl) -beta-D- glucopyranosyl] oxy]-2,3-dihydro-5- hydroxy-2-(3- hydroxy-4- methoxyphenyl)- 4H-1-benzopyran-4- one	Hesperidin	 Citrus bioflavonoids Hesperidin 	N/A	N/A	N/A	 Isolate Synthetic 		



		Source information	n			
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)
 3,3',4',5,7- Pentahydroxyflav one-3-rutinoside 3-[[6-O-(6-Deoxy- alpha-L- mannopyranosyl)- beta-D- glucopyranosyl]ox y]-2-(3,4- dihydroxyphenyl)- 5,7-dihydroxy- 4H-1-benzopyran- 4-one 3-(O-6-Deoxy- alpha-L- mannopyranosyl- (1-6)-beta-D- glucopyranosylox y)-2-(3,4- dihydroxyphenyl)- 5,7-dihydroxy- 4H-chromen-4- one 	 Quercetin-3 rutinoside Rutin Rutoside 	 Citrus bioflavonoids Rutin Rutoside trihydrate 	N/A	N/A	N/A	 Isolate Synthetic
 (L-3-Carboxy-2-hydroxypropyl)tri methylammonium hydroxide, inner salt (R)-3-Carboxy-2- hydroxy-N,N,N- trimethyl-1- propanaminium hydroxide, inner salt L-Carnitine Levocarnitine (3R,3'R,6'R)- beta epsilon- 	 L-Carnitine Levocarnitine Lutein 	 L-Carnitine tartrate L-Carnitine fumarate N/A 	N/A N/A	N/A Tagetes erecta	N/A Herb flowering	Synthetic Isolate
beta,epsilon- Carotene-3,3'-diol			27/1		flowering oleoresin	
 (3R,3'R)- beta,beta- Carotene-3,3'-diol 	Zeaxanthin	N/A	N/A	Tagetes erecta	Herb flowering oleoresin	Isolate

Antioxidants Page 3 of 99 Canada



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
 all-trans-beta- Carotene-3,3'-diol 		Zeaxanthin	N/A	N/A	N/A	Synthetic		
 3,3'-Dihydroxy- 4,4'-diketo-beta- carotene 3,3'-Dihydroxy- beta,beta- carotene-4,4'- dione 	Astaxanthin	N/A	N/A	Haematococcus pluvialis	Whole	Isolate		
(<i>all-E</i>)- 2,6,10,15,19,23- Hexamethyl-	Squalene	N/A	N/A	 Elaeis guineensis Olea europaea 	Fruit	Isolate		
2,6,10,14,18,22- tetracosahexaene			Shark	N/A	Liver			
all-trans-Lycopene	Lycopene	N/A	N/A	Solanum lycopersicum	Fruit flesh	Isolate		
		Lycopene	N/A	N/A	N/A	Synthetic		
 (E)-5-(p- Hydroxystyryl) resorcinol 	Resveratrol	N/A	N/A	Reynoutria japonica	Root	Isolate		
 5-[(1E)-2-(4- Hydroxyphenyl)et henyl]-1,3- benzenediol 		N/A	N/A	Vitis vinifera	Fruit			
 <i>trans</i>-3,4',5- Trihydroxystil bene <i>trans</i>-Resveratrol 		Resveratrol	N/A	N/A	N/A	Synthetic		
Abelmoschus esculentus	 Gumbo Lady's-fingers Okra 	N/A	N/A	Abelmoschus esculentus	Fruit	DryFresh		
Actinidia chinensis	Golden kiwi	N/A	N/A	Actinidia chinensis	Fruit	DryFresh		
Actinidia deliciosa	 Chinese- gooseberry Kiwi Kiwifruit 	N/A	N/A	Actinidia deliciosa	Fruit	DryFresh		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Active hexose correlated compound	 Active hexose correlated compound AHCC 	N/A	N/A	Lentinula edodes	Mycelium	Isolate		
Alaria esculenta	Kutare	N/A	N/A	Alaria esculenta	ThallusWhole	Dry		
Allium ampeloprasum	 Great-headed garlic Wild leek 	N/A	N/A	Allium ampeloprasum	Leaf	DryFresh		
Allium cepa	OnionShallot	N/A	N/A	Allium cepa	Bulb	▶ Dry▶ Fresh		
Allium porrum	Leek	N/A	N/A	Allium porrum	Leaf	▶ Dry▶ Fresh		
Allium sativum	Garlic	N/A	N/A	Allium sativum	Bulb	DryFresh		
Allium schoenoprasum	Bei congChives	N/A	N/A	Allium schoenoprasum	Leaf	DryFresh		
Aloe vera	 Aloe Aloe vera Barbados aloe Curaçao aloe True aloe West Indian aloe 	N/A	N/A	Aloe vera	Leaf gel	Fresh		
Alpinia galanga	 Greater galanga Greater galangal Languas Siamese-ginger 	N/A	N/A	Alpinia galanga	Rhizome	DryFresh		
Amorphophallus konjac	 Devil's-tongue Elephant-yam Konjac Konnyaku Leopard-palm Mo-yu Snake-palm Umbrella arum 	N/A	N/A	Amorphophallus konjac	RootTuber	DryFresh		
Amorphophallus paeoniifolius	Elephant yam	N/A	N/A	Amorphophallus paeoniifolius	RootTuber	DryFresh		
Ananas comosus var. comosus	Pineapple	N/A	N/A	Ananas comosus var. comosus	Fruit	DryFresh		
Anethum graveoler	<i>ıs</i> ► Dill ► Garden dill	N/A	N/A	Anethum graveolens	Herb top	DryFresh		



	Common name(s)	Source information						
Proper name(s)		Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
	Shi luo							
Aphanizomenon flos-aquae	Aphanizomenon flos-aquae	N/A	N/A	Aphanizomenon flos-aquae	Whole	Dry		
Apium graveolens	Celery	N/A	N/A	Apium graveolens	Herb topRootTuber	DryFresh		
Argania spinosa	Argan seed oil	N/A	N/A	Argania spinosa	Seed	Fresh		
Aristotelia chilensis	Maqui	N/A	N/A	Aristotelia chilensis	Fruit	Dry		
Aronia melanocarpa	ApfelbeereBlack chokeberry	N/A	N/A	Aronia melanocarpa	Fruit	DryFresh		
Artemisia dracunculus	 French tarragon Russian tarragon Silky wormwood Tarragon 	N/A	N/A	Artemisia dracunculus	Leaf	Dry		
Artemisia vulgaris	 Common mugwort Felon herb Mugwort St. John's plant Wild wormwood 	N/A	N/A	Artemisia vulgaris	Herb top	Dry		
Arthrospira platensis	Spirulina	N/A	N/A	Arthrospira platensis	Whole	DryFresh		
Ascophyllum nodosum	KnuppetangNorwegian Kelp	N/A	N/A	Ascophyllum nodosum	ThallusWhole	Dry		
Asparagus officinalis	 Asparagus Common asparagus Garden asparagus 	N/A	N/A	Asparagus officinalis	Shoot	DryFresh		
Avena sativa	 Common oat Oat 	N/A	N/A	Avena sativa	SeedSeed bran	Dry		
	Red oatSide oatTree oat	N/A	N/A	Avena sativa	Sprout	DryFresh		
	Oatgrass	N/A	N/A	Avena sativa	Herb topLeaf	DryFresh		
	Oat Oil	N/A	N/A	Avena sativa	Seed	Fresh		
Basella alba	 Ceylon-spinach Indian-spinach Luo kui Malabar- 	N/A	N/A	Basella alba	Leaf	DryFresh		





		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
	nightshade Malabar-spinach Vine-spinach							
Berberis vulgaris	 Common barberry European barberry Jaundice-berry Piprage 	N/A	N/A	Berberis vulgaris	Fruit	Dry		
Bergera koenigii	Curryleaf	N/A	N/A	Bergera koenigii	Leaf	Dry		
Beta vulgaris	 Beet Beetroot Field beet Fodder beet Foliage beet Garden beet Mangel Mangel-wurzel Mangold Red beet Sicilian broad-rib beet Spinach beet Spinach chard Sugar beet Swiss chard Tian cai Yellow beet 	N/A	N/A	Beta vulgaris	 Leaf Root 	 Dry Fresh 		
Brassica juncea	 Indian mustard Oriental mustard 	N/A	N/A	Brassica juncea	Leaf	DryFresh		
Brassica nigra	Black mustardBrown mustard	N/A	N/A	Brassica nigra	Seed	Dry		
Brassica oleracea var. botrytis	Cauliflower	N/A	N/A	Brassica oleracea var. botrytis	Herb top	DryFresh		
Brassica oleracea var. capitata	CabbageRed cabbageWhite cabbage	N/A	N/A	Brassica oleracea var. capitata	Herb top	DryFresh		
Brassica oleracea var. gemmifera	Bao zi gan lanBrussels sprouts	N/A	N/A	Brassica oleracea var. gemmifera	Sprout	DryFresh		



		Source information					
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)	
Brassica oleracea var. italica	 Asparagus broccoli Broccoli Calabrese Cape broccoli Heading broccoli Purple cauliflower Sprouting broccoli Winter broccoli 	N/A	N/A	Brassica oleracea var. italica	 Herb top Sprout 	 Dry Fresh 	
Brassica oleracea var. oleracea	Wild cabbage	N/A	N/A	Brassica oleracea var. oleracea	Herb top	DryFresh	
Brassica oleracea var. viridis	 Collards Cow cabbage Fodder kale Kale Spring-heading cabbage Tall kale Tree kale 	N/A	N/A	Brassica oleracea var. viridis	Leaf	 Dry Fresh 	
Brassica rapa	 Rapini Seven-top turnip Turnip Tyfon 	N/A	N/A	Brassica rapa	Root	DryFresh	
Camellia sinensis	 Camellia sinensis extract Green tea extract Tea extract Thea sinensis extract White tea extract 	N/A	N/A	Camellia sinensis	Leaf	N/A	
Cannabis sativa	Da maHemp	N/A	N/A	Cannabis sativa	Seed	Dry	
Capparis spinosa	CaperCaperbush	N/A	N/A	Capparis spinosa	Fruit	DryFresh	
Capsicum annuum	 Cayenne Cayenne pepper Chili pepper Paprika Red Pepper 	N/A	N/A	Capsicum annuum	Fruit	Dry	
Carica papaya	PapayaPawpaw	N/A	N/A	Carica papaya	Fruit	DryFresh	



		Source information					
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)	
Ceratonia siliqua	 Bread- St John's Carob Ceratonia Locust-bean St. John's-bread St John's bread 	N/A	N/A	Ceratonia siliqua	Fruit	Dry	
Chamaemelum nobile	 English chamomile Garden chamomile Noble chamomile Roman chamomile Russian chamomile 	N/A	N/A	Chamaemelum nobile	Flower	Dry	
Chenopodium quinoa	QuinguaQuinoa	N/A	N/A	Chenopodium quinoa	Seed	Dry	
Chlorella vulgaris	Chlorella	N/A	N/A	Chlorella vulgaris	Broken cell	DryFresh	
Cicer arietinum	 Bengal gram Chick-pea Garbanzo Gram 	N/A	N/A	Cicer arietinum	Seed	Dry	
Cichorium endivia	Escarole	N/A	N/A	Cichorium endivia	Leaf	DryFresh	
Cichorium intybus	 Belgium endive Chicory Radicchio 	N/A	N/A	Cichorium intybus	LeafRoot	DryFresh	
Cinnamomum aromaticum	 Cassia Cassia cinnamon Chinese cinnamon Chinese cinnamon tree Rou gui 	N/A	N/A	Cinnamomum aromaticum	 Branch bark Stem bark Trunk bark 	Dry	
	 Ceylon cinnamon Cinnamon True cinnamon Tvak 	N/A	N/A	Cinnamomum verum	 Branch bark Shoot bark 	Dry	
<i>Citrullus lanatus</i> var. <i>lanatus</i>	Watermelon	N/A	N/A	<i>Citrullus lanatus</i> var. <i>lanatus</i>	Fruit	DryFresh	



		Source information	n			
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)
Citrus aurantiifolia	 Egyptian lime Indian lime Key lime Lime Mexican lime Sour lime 	N/A	N/A	Citrus aurantiifolia	Fruit	DryFresh
Citrus bioflavonoids	Citrus bioflavonoids	N/A	N/A	 Citrus sinensis Citrus limon Citrus reticulata Citrus aurantiifolia Citrus paradisi 	 Fruit peel Fruit 	Isolate
Citrus limon	 Lemon Li meng Limum Ning meng 	N/A	N/A	Citrus limon	Fruit	DryFresh
Citrus maxima	 Pomelo Pummelo Shaddock Yu Zhu luan 	N/A	N/A	Citrus maxima	Fruit	DryFresh
Citrus paradisi	 Grapefruit Yuan you 	N/A	N/A	Citrus paradisi	Fruit	DryFresh
Citrus reticulata	 Ju Mandarin orange Tangerine 	N/A	N/A	Citrus reticulata	Fruit	DryFresh
Citrus sinensis	 Blood orange Navel orange Red orange Sweet orange Tian cheng Valencia orange 	N/A	N/A	Citrus sinensis	Fruit	DryFresh
Coccinia grandis	 Ivy gourd Little gourd 	N/A	N/A	Coccinia grandis	Fruit	DryFresh
Cocos nucifera	 Coconut Coconut palm Coconut water Copra Nariyal 	N/A	N/A	Cocos nucifera	Fruit	DryFresh
	Coconut oil	N/A	N/A	Cocos nucifera	Seed endosperm	Fresh





		Source information	n			
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)
Coriandrum sativun	 Chinese parsley Chinese-parsley Cilantro Coriander Parsley- Chinese 	N/A	N/A	Coriandrum sativum	Leaf	DryFresh
Cucumis melo subsp. melo var. cantalupo	CantaloupeNetted melon	N/A	N/A	Cucumis melo subsp. melo var. cantalupo	Fruit	DryFresh
Cucumis sativus	Cucumber	N/A	N/A	Cucumis sativus	Fruit	DryFresh
Cucurbita maxima	Winter squash	N/A	N/A	Cucurbita maxima	Fruit	DryFresh
Cucurbita moschata	Butternut squashCheese pumpkin	N/A	N/A	Cucurbita moschata	Fruit Seed	DryFreshDry
Cucurbita pepo	 Acorn squash Bitter bottle gourd Ghia kaddu Marrow Pumpkin Squash 	N/A	N/A	Cucurbita pepo	Fruit	▶ Dry ▶ Fresh
Cucurbita pepo var. pepo	=	N/A	N/A	<i>Cucurbita pepo</i> var. <i>pepo</i>	Fruit	DryFresh
Cuminum cyminum	Cumin	N/A	N/A	Cuminum cyminum	Fruit	Dry
Curcuma longa	 Common turmeric Curcuma Indian-saffron Jianghuang Turmeric Yellow ginger 	N/A	N/A	Curcuma longa	Rhizome	Dry
Cydonia oblonga	Quince	N/A	N/A	Cydonia oblonga	Fruit	DryFresh
Cymbopogon citratus	 Fever grass Lemongrass West Indian lemongrass 	N/A	N/A	Cymbopogon citratus	Herb topLeaf	DryFresh
Cynara cardunculus	 Artichoke Artichoke thistle Cardoon Cynara Garden artichoke 	N/A	N/A	Cynara cardunculus	Leaf	Dry



Proper name(s)		Source information						
	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
	Globe artichokeScotch thistle							
Daucus carota	Carrot	N/A	N/A	Daucus carota	LeafRoot	DryFresh		
Dioscorea alata	 Greater yam Guyana arrowroot Ten-months yam Water yam White yam Winged yam Yam 	N/A	N/A	Dioscorea alata	Root	DryFresh		
Diospyros virginiana	American persimmon	N/A	N/A	Diospyros virginiana	Fruit	DryFresh		
Elaeis guineensis	African oil palmOil palm	N/A	N/A	Elaeis guineensis	Fruit	Fresh		
Euterpe oleracea	 Acai Açai Assai palm Cabbage palm 	N/A	N/A	Euterpe oleracea	 Fruit flesh Fruit juice 	Dry		
Fagopyrum esculentum	 Buckwheat Common buckwheat Japanese buckwheat Qiao mai Silverhull buckwheat 	N/A	N/A	Fagopyrum esculentum	Seed	Dry		
Ficus carica	 Fig Fig tree Wu hua guo 	N/A	N/A	Ficus carica	Fruit	DryFresh		
Foeniculum vulgar subsp. vulgare var. dulce	e ► Roman fennel	N/A	N/A	Foeniculum vulgare subsp. vulgare var. dulce	Bulb	DryFresh		
Fragaria virginian	 <i>a</i> Scarlet strawberry Virginia strawberry Wild strawberry 	N/A	N/A	Fragaria virginiana	Fruit	DryFresh		
Fragaria x ananass	Garden strawberry ► Strawberry	N/A	N/A	Fragaria x ananassa	Fruit	DryFresh		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Fucus vesiculosus	 Black tang Bladder fucus Kelpware Seawrack 	N/A	N/A	Fucus vesiculosus	ThallusWhole	Dry		
Ganoderma lucidun	 Ganoderma Ling zhi Reishi 	N/A	N/A	Ganoderma lucidum	 Cultured mycelium Fruiting body Mycelium 	Dry		
Garcinia mangostana	 King's-fruit Manggis Mangostan Mangosteen 	N/A	N/A	Garcinia mangostana	Fruit	DryFresh		
Glycine max	 Defatted soybean flour Defatted soy flour 	N/A	N/A	Glycine max	Seed	Dry		
	Soybean FlourSoy Flour	N/A	N/A	Glycine max	Seed	Dry		
	 Black soya bean Da dou Soy Soya Soyabean Soybean 	N/A	N/A	Glycine max	Sprout	DryFresh		
Grape seed extract	Grape seed extract	N/A	N/A	Vitis vinifera	Seed	N/A		
Green coffee bean extract	Green coffee bean extract	N/A	N/A	 Coffea arabica Coffea canephora 	Seed	N/A		
Haematococcus pluvialis	Haematococcus pluvialis	N/A	N/A	Haematococcus pluvialis	Whole	Dry		
Helianthus annuus	MirasolSunflower	N/A	N/A	Helianthus annuus	Seed	Dry		
	Sunflower oil	N/A	N/A	Helianthus annuus	Seed	Fresh		
<i>Hericium erinaceus</i>	Lion's Mane	N/A	N/A	Hericium erinaceus	Fruiting body	Dry		
Hibiscus sabdariffa	 Indian-sorrel Jamaica-sorrel Red-sorrel Roselle Sorrel 	N/A	N/A	Hibiscus sabdariffa	Leaf	DryFresh		

Antioxidants Page 13 of 99 Canada



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Hippophae rhamnoides	 Sallowthorn Sea buckthorn Sea-buckthorn Shaji 	N/A	N/A	Hippophae rhamnoides	Fruit	DryFresh		
Hordeumvulgare	BarleyDa mai	N/A	N/A	Hordeum vulgare	Seed Sprout	Dry Dry Fresh		
	Barleygrass	N/A	N/A	Hordeumvulgare	Herb topLeaf	DryFresh		
Ipomoea batatas	Sweet potato	N/A	N/A	Ipomoea batatas	RootTuber	DryFresh		
Irvingia gabonensis	African wild mango	N/A	N/A	Irvingia gabonensis	Seed	Dry		
Juglans regia	Walnut	N/A	N/A	Juglans regia	Seed	Dry		
 L-alpha- Acetamido-beta- mercaptopropioni c acid N-Acetyl-L- cysteine 	N-Acetyl-L-cysteine	N-Acetyl-L- cysteine	N/A	N/A	N/A	Synthetic		
 L-Glutathione N-(N-L-gamma- 	L-Glutathione	N/A	N/A	Saccharomyces cerevisiae	Whole	Isolate		
Glutamyl-L- cysteinyl)glycine		 Glutathione S- Acetylglutathio ne 	N/A	N/A	N/A	Synthetic		
Lactuca sativa	Garden lettuceLettuce	N/A	N/A	Lactuca sativa	Leaf	DryFresh		
	Curled lettuceLeaf lettuce	N/A	N/A	<i>Lactuca sativa</i> var. <i>crispa</i>	Leaf	DryFresh		
Lactuca sativa var. longifolia	Cos lettuceRomaine lettuce	N/A	N/A	Lactuca sativa var. longifolia	Leaf	DryFresh		
Lagenaria siceraria	 Bottle gourd Calabash Calabash gourd Hu lu White-flower gourd 	N/A	N/A	Lagenaria siceraria	Fruit	 Dry Fresh 		
Laminaria digitata	 Horsetail kelp Kelp Silketare 	N/A	N/A	Laminaria digitata	ThallusWhole	Dry		

Antioxidants Page 14 of 99 Canada



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Laminaria japonica	 Hai dai Japanese kelp Makombu Sea tangle 	N/A	N/A	Laminaria japonica	ThallusWhole	Dry		
Lens culinaris	GramLentil	N/A	N/A	Lens culinaris	Seed	Dry		
Lentinula edodes	Shiitake	N/A	N/A	Lentinula edodes	 Cultured mycelium Fruiting body Mycelium 	Dry		
Lepidium meyenii	MacaPeruvian-ginseng	N/A	N/A	Lepidium meyenii	 Hypocoty Root 	Dry		
Lepidium sativum	Garden cress	N/A	N/A	Lepidium sativum	Leaf	▶ Dry▶ Fresh		
Linum usitatissimum	FlaxFlaxseed	N/A	N/A	Linum usitatissimum	Seed	▶ Dry		
	 Linseed 	N/A	N/A	Linum usitatissimum	Sprout	DryFresh		
Lonicera caerulea	Blue honeysuckleHaskap	N/A	N/A	Lonicera caerulea	Fruit	DryFresh		
Lutein esters	Lutein esters	N/A	N/A	Tagetes erecta	Herb flowering oleoresin	Isolate		
Lycium barbarum	 Barbary matrimony-vine Barbary wolfberry Chinese wolfberry Goji Matrimony-vine Ning xia gou qi 	N/A	N/A	Lycium barbarum	Fruit	Dry		
Malpighia emarginata	West Indian-cherry	N/A	N/A	Malpighia emarginata	Fruit	DryFresh		
Malpighia glabra	 Acerola Barbados cherry tree Escobillo 	N/A	N/A	Malpighia glabra	Fruit	DryFresh		
Malus domestica	Apple	N/A	N/A	Malus domestica	Fruit	▶ Dry ▶ Fresh		
Malus pumila	Paradise apple	N/A	N/A	Malus pumila	Fruit	DryFresh		





		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Mangifera indica	Mango	N/A	N/A	Mangifera indica	Fruit	DryFresh		
Medicago sativa	AlfalfaLucerne	N/A	N/A	Medicago sativa	Herb top	Dry		
 Mixed tocopherol concentrate Tocopherol concentrate, mixed 	 Mixed tocopherol concentrate Tocopherols 	N/A	N/A	 Brassica napus Brassica rapa Carthamus tinctoris Glycine max Helianthus annuus Zea mays Cocos nucifera Olea europaea 	Seed Seed endosperm Fruit flesh	Isolate		
Morinda citrifolia	 Indian-mulberry Noni Rotten cheesefruit 	N/A	N/A	Morinda citrifolia	Fruit	Dry		
Moringa oleifera	 Ben-oil-tree Benzolive-tree Drumsticktree Horseradish-tree Malunggay Moringa West Indian ben 	N/A	N/A	Moringa oleifera	LeafSeed	Dry		
Morus alba	SangWhite mulberry	N/A	N/A	Morus alba	Fruit	DryFresh		
Musa x paradisiaca		N/A	N/A	Musa x paradisiaca	Fruit	DryFresh		
Myrciaria dubia	Camu-camu	N/A	N/A	Myrciaria dubia	Fruit	Dry		
Nasturtium officinale	 Bronkors Browncress Mizu-garashi Oranda-garashi Summer watercress Watercress 	N/A	N/A	Nasturtium officinale	 Herb top Leaf 	 Dry Fresh 		
Nelumbo nucifera	East Indian lotusLian	N/A	N/A	Nelumbo nucifera	Seed	DryFresh		

Antioxidants Page 16 of 99 Canada



		Source informati	on			
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)
	► Lotus	0				
Ocimum tenuiflorum	 Holy basil Rama tulsi Sacred basil Tulsi 	N/A	N/A	Ocimum tenuiflorum	Leaf	Dry
Olea europaea	Olive leaf	N/A	N/A	Olea europaea	Leaf	▶ Dry▶ Fresh
	Olive	N/A	N/A	Olea europaea	Fruit	▶ Dry▶ Fresh
	Olive oil	N/A	N/A	Olea europaea	Fruit	Fresh
Ophiocordyceps sinensis	 Chinese Caterpillar Fungus Cordyceps Cordyceps sinensis Dong chong xia cao 	N/A	N/A	Ophiocordyceps sinensis	Stroma	Dry
Opuntia ficus- indica	 Barbary-fig Indian-fig Mission cactus Prickly-pear 	N/A	N/A	Opuntia ficus- indica	FruitLeaf	DryFresh
Origanum vulgare	Common OreganoOregano	N/A	N/A	Origanum vulgare	Leaf	Dry
Oryza sativa	 Asian rice Black Rice Dao Lowland rice Purple Rice Rice Upland rice 	N/A	N/A	Oryza sativa	 Seed Seed bran 	 Cooked Cooked and dry
Paecilomyces hepiali	 Cultured Chinese Caterpillar Fungus Fa jiao chong cao jun 	N/A	N/A	Paecilomyces hepiali	Cultured mycelium	Dry
Palmaria palmata	 Creathnach Dillisk Duilleasc Dulse 	N/A	N/A	Palmaria palmata	ThallusWhole	DryFresh
Panicum miliaceum	► Common millet	N/A	N/A	Panicum	Seed	Dry
	MilletMillet panic			miliaceum	Sprout	DryFresh

Antioxidants Page 17 of 99 Canada



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Passiflora edulis	Purple granadilla	N/A	N/A	Passiflora edulis	Fruit	DryFresh		
Passiflora quadrangularis	Giant granadilla	N/A	N/A	Passiflora quadrangularis	Fruit	DryFresh		
Pastinaca sativa	Parsnip	N/A	N/A	Pastinaca sativa	RootTuber	DryFresh		
Persea americana	Avocado	N/A	N/A	Persea americana	Fruit	DryFresh		
Petroselinum crispum	Parsley	N/A	N/A	Petroselinum crispum	Herb top	DryFresh		
	 Kidney bean Navy bean White kidney bean 	N/A	N/A	Phaseolus vulgaris	Seed	Dry		
Phoenix dactylifera		N/A	N/A	Phoenix dactylifera	Fruit	DryFresh		
Phyllanthus emblica	 Amalaki Amla Emblic Emblic myrobalan Indian gooseberry Myrobalan 	N/A	N/A	Phyllanthus emblica	Fruit	Dry		
Pimenta dioica	 Allspice Clover-pepper Jamaica-pepper Pimenta Pimento 	N/A	N/A	Pimenta dioica	Fruit	Dry		
Pimpinella anisum	AniseSweet-cumin	N/A	N/A	Pimpinella anisum	Fruit	Dry		
Pinus pinaster	 Cluster pine Maritime pine Trosden 	N/A	N/A	Pinus pinaster	Stem bark	DryFresh		
Pisum sativum	Pea	N/A	N/A	Pisum sativum	Seed	DryFresh		
Porphyra yezoensis	Nori	N/A	N/A	Porphyra yezoensis	ThallusWhole	DryFresh		
Propolis	 Bee propolis Feng jiao Propolis Propolis balsam Propolis resin Propolis wax 	N/A	N/A	Apis mellifera	Secretion	Dry		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Prunus armeniaca	 Apricot Siberian apricot Xing 	N/A	N/A	Prunus armeniaca	Fruit	DryFresh		
Prunus avium	 Bird cherry Gean Mazzard cherry Sweet cherry 	N/A	N/A	Prunus avium	Fruit	DryFresh		
Prunus cerasus	 Morello cherry Pie cherry Sour cherry Tart cherry 	N/A	N/A	Prunus cerasus	Fruit	DryFresh		
Prunus domestica	 Ou zhou li Prune plum 	N/A	N/A	Prunus domestica	Fruit	▶ Dry▶ Fresh		
Prunus dulcis	 Almond Almond- bitter Almond- sweet Bitter almond Sweet almond 	N/A	N/A	Prunus dulcis	Seed	Dry		
Prunus persica	 Momo Peach Tao 	N/A	N/A	Prunus persica	Fruit	DryFresh		
Prunus persica var. nucipersica	Nectarine	N/A	N/A	Prunus persica var. nucipersica	Fruit	DryFresh		
Prunus serotina	 Black cherry Rum cherry Wild cherry 	N/A	N/A	Prunus serotina	Fruit	DryFresh		
Prunus virginiana	Bitter-berryChokecherry	N/A	N/A	Prunus virginiana	Fruit	DryFresh		
Psidium guajava	 Guava Koejawel Lemon guava 	N/A	N/A	Psidium guajava	Fruit	DryFresh		
Punica granatum	Pomegranate	N/A	N/A	Punica granatum	FruitSeed aril	DryFresh		
Pyrus communis	Pear	N/A	N/A	Pyrus communis	Fruit	DryFresh		
Pyrus pyrifolia	Chinese pearNashi pear	N/A	N/A	Pyrus pyrifolia	Fruit	DryFresh		
Raphanus sativus	Luo boRadish	N/A	N/A	Raphanus sativus	 Leaf Root Tuber Sprout 	DryFresh		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Rhodiola rosea	 Hong jing tian King's-crown Rhodiola Roseroot 	N/A	N/A	Rhodiola rosea	RootRoot and rhizome	Dry		
Ribes nigrum	Black currant	N/A	N/A	Ribes nigrum	Fruit	DryFresh		
Ribes uva-crispa	 English gooseberry European gooseberry Gooseberry 	N/A	N/A	Ribes uva-crispa	Fruit	DryFresh		
Rosa canina	 Common briar Dogbrier Dog rose 	N/A	N/A	Rosa canina	Fruit	DryFresh		
Rosmarinus officinalis	Rosemary	N/A	N/A	Rosmarinus officinalis	Leaf	Dry		
Royal jelly	Royal jelly	N/A	N/A	Apis mellifera	Secretion	Fresh		
Rubus arcticus	Arctic raspberry	N/A	N/A	Rubus arcticus	Fruit	DryFresh		
Rubus idaeus	 European raspberry European red raspberry Fu pen zi Raspberry Red raspberry 	N/A	N/A	Rubus idaeus	Fruit	 Dry Fresh 		
Rubus occidentalis	 Blackcap Black raspberry 	N/A	N/A	Rubus occidentalis	Fruit	DryFresh		
Rubus plicatus	 Blackberry Bramble Shrubby blackberry 	N/A	N/A	Rubus plicatus	Fruit	DryFresh		
Salvia hispanica	Chia	N/A	N/A	Salvia hispanica	Seed Sprout	Dry Dry Fresh		
Salvia officinalis	 Common sage Dalmatian sage Garden sage Sage 	N/A	N/A	Salvia officinalis	Leaf	Dry		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Sambucus nigra subsp. nigra	Black elderEuropean elder	N/A	N/A	Sambucus nigra subsp. nigra	Fruit	Dry		
Sambucus nigra subsp. canadensis	 American elder Canadian elder Sweet Elder 	N/A	N/A	Sambucus nigra subsp. canadensis	Fruit	Dry		
Selenium	Selenium	 Methylselenocy steine Selenious acid Selenium amino acid chelate Selenium aspartate Selenium citrate Selenium dioxide, monohydrate Selenium fumarate Selenium glutarate Selenium glycinate Selenium hydrolyzed animal protein (HAP) chelate Selenium hydrolyzed vegetable protein (HVP) chelate Selenium malate Selenium succinate Selenium enriched yeast Selenocysteine Selenomethioni ne 	N/A	N/A	N/A	 Isolate Synthetic 		



		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
		 Sodium hydrogen selenite Sodium selenate Sodium selenite 						
Sesamum indicum	 Beni Beniseed Benneseed Black sesame Black sesame seeds Hu ma Sesame 	N/A	N/A	Sesamum indicum	Seed	Dry		
Setaria italica	Italian milletSu	N/A	N/A	Setaria italica	Seed	Dry		
Solanum lycopersicum	Tomato	N/A	N/A	Solanum lycopersicum	Fruit	DryFresh		
	Tomato extract	N/A	N/A	Solanum lycopersicum	Fruit flesh	DryFresh		
Solanum tuberosum	Potato	N/A	N/A	Solanum tuberosum	RootTuber	DryFresh		
Spinacia oleracea	Bo caiSpinach	N/A	N/A	Spinacia oleracea	Leaf	DryFresh		
Syzygium aromaticum	Clove	N/A	N/A	Syzygium aromaticum	Flower bud	Dry		
Tagetes erecta	 African marigold Aztec marigold Big marigold Saffron marigold 	N/A	N/A	Tagetes erecta	Flower	Dry		
Tamarindus indica	 Indian tamarind Kilytree Tamarin Tamarind 	N/A	N/A	Tamarindus indica	Fruit	Dry		
 Tocotrienol concentrate Tocotrienols 	 Tocotrienol concentrate Tocotrienols 	N/A	N/A	Bixa orenellana Elaeis guineensis Oryza sativa	Seed Fruit Seed bran	Isolate		
Trigonella foenum- graecum	 Common fenugreek Fenugreek Greek-clover Greek hay 	N/A	N/A	Trigonella foenum-graecum	Seed	Dry		





	Common name(s)	Source information						
Proper name(s)		Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
	▶ Hu lu ba							
Triticum aestivum	 Bread wheat 	N/A	N/A	Triticum aestivum	Seed	Dry		
	► Wheat				Sprout	▶ Dry		
	► Xiao mai				Sprout	► Fresh		
	Wheatgrass			Triticum	 Herb top 	► Dry		
	C			aestivum	▶ Leaf	► Fresh		
	Wheat germ oil			Triticum	Seed germ	Fresh		
				aestivum	_			
Ubiquinol	Ubiquinol	Ubiquinol	N/A	N/A	N/A	Synthetic		
Vaccinium	► American	N/A	N/A	Vaccinium	Fruit	► Dry		
corymbosum	blueberry			corymbosum		► Fresh		
	Blueberry							
	 Highbush 							
	blueberry							
	Swamp blueberry							
Vaccinium	 Blueberry 	N/A	N/A	Vaccinium	Fruit	Dry		
angustifolium	► Late sweet			angustifolium		► Fresh		
	blueberry ► Lowbush							
	blueberry							
	 Low sweet 							
	blueberry							
	 Sweethurts 							
	▶ Upland lowbush							
	blueberry							
Vaccinium pallidum	<i>i</i> ► Blueberry	N/A	N/A	Vaccinium	Fruit	► Dry		
	 Hillside lowbush 			pallidum		► Fresh		
	blueberry							
Vaccinium	 American 	N/A	N/A	Vaccinium	Fruit	Fresh		
macrocarpon	cranberry			macrocarpon				
	Cranberry							
	 Large American cranberry 							
	 Large cranberry 							
	 Cranberry juice 	N/A	N/A	Vaccinium	Fruit	Dry		
	powder		1 1/2 1	macrocarpon	1 I WIL			
	 Dried Cranberry 							
	Juice							
	 Dried Vaccinium 							
	macrocarpon							
	(cranberry) fruit							





		Source information						
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)		
Vaccinium	juice Shiny blueberry	N/A	N/A	Vaccinium	Fruit	► Dry		
myrsinites	Shilly blueberry		11/11	myrsinites	Tun	Fresh		
Vaccinium myrtillus	 Bilberry European blueberry Huckleberry Whortleberry 	N/A	N/A	Vaccinium myrtillus	Fruit	Dry		
Vaccinium vitis- idaea	 Alpine cranberry Cowberry Foxberry Lingberry Lingen Lingenberry Lingon Lingonberry Rock cranberry 	N/A	N/A	Vaccinium vitis- idaea	Fruit	 Dry Fresh 		
Vicia faba	Fava bean	N/A	N/A	Vicia faba	Fruit	DryFresh		
Vigna radiata var. radiata	Lu douMung Bean	N/A	N/A	Vigna radiata var. radiata	Seed	Dry		
<i>Vigna unguiculata</i> subsp. <i>cylindrica</i>	 Catjang Catjang cowpea Sow-pea 	N/A	N/A	Vigna unguiculata subsp. cylindrica	Seed	DryFresh		
Vitamin C	Vitamin C	 Ascorbic acid Ascorbic acid Ascorbic acid 2-O-glucoside Ascorbyl methylsilanol pectinate Ascorbyl palmitate Calcium ascorbate Calcium ascorbate, dihydrate Magnesium ascorbate Magnesium ascorbyl phosphate Manganese (II) 	N/A	N/A	N/A	 Isolate Synthetic 		



		Source information					
Proper name(s)	Common name(s)	Source	Organism	Source	Part(s)	Preparation(s)	
		ingredient(s)	group(s)	material(s)	rait(s)	r reparation(s)	
		ascorbate					
		 Niacinamide 					
		ascorbate					
		Potassium					
		ascorbate					
		 Sodium 					
		ascorbate					
		► Zinc ascorbate					
Vitamin E	Vitamin E	 d-alpha 	N/A	N/A	N/A	 Isolate 	
		Tocopherol				 Synthetic 	
		 d-alpha 					
		Tocopheryl					
		acetate					
		► d-alpha					
		Tocopheryl					
		acid succinate					
		► dl-alpha					
		Tocopherol					
		► dl-alpha					
		Tocopheryl					
		acetate					
		 dl-alpha Transmission 					
		Tocopheryl acid succinate					
Vitis labrusca	Concord grams	N/A	N/A	Vitis labrusca	Fruit		
vilis iadrusca	Concord grape	IN/A	IN/A	vilis labrusca	Fruit	DryFresh	
Vitis winiford	► Common	N/A	N/A	Vitis vinifora	▶ Fruit	Dry	
Vitis vinifera		IN/A	1N/A	Vitis vinifera	FruitFruit skin	~	
	grapevine				Fruit skillSeed	Flesh	
	European grapeGrape				- Seeu		
	Grapevine						
	 Red wine extract 	N/A	N/A	Vitis vinifera	Fruit	► Dry	
	Red wine extractRed wine	11/21	11/11	vilis vinijera	Trun	Fresh	
	polyphenol extract	t				- 110511	
Zea mays	 Corn 	N/A	N/A	Zea mays	Seed	Dry	
	Maize	- 1/ • •					
	 Purple corn 						
	 Yu shu shu 						
Zeaxanthin esters	Zeaxanthin esters	N/A	N/A	Tagetes erecta	Herb	Isolate	
					flowering		
					oleoresin		
Zingiber officinale	▶ Ginger	N/A	N/A	Zingiber	Rhizome	Dry	
C 00	▶ Jiang		1	officinale		-	

Antioxidants Page 25 of 99 Canada



		Source information				
Proper name(s)	Common name(s)	Source ingredient(s)	Organism group(s)	Source material(s)	Part(s)	Preparation(s)
Ziziphus jujuba	Chinese dateJujubeZao	N/A	N/A	Ziziphus jujuba	Fruit	DryFresh
Fruit and/or vego	etable or sprout blends					
	substances (i.e. plants)					
Fruit blend	Fruit blend	N/A	N/A	 Ananas comosus Aronia melanocarpa Carica papaya Citrullus lanatus var. lanatus var. lanatus Citrus aurantiifolia Citrus aurantium Citrus limon Citrus paradisi Citrus sinensis Citrus sinensis Cucumis melo Euterpe oleracea Fragaria vesca Fragaria vesca Fragaria vesca Fragaria vesca Fragaria vesca Gitchi chinensis Malpighia glabra Malus domestica Mangifera indica Morinda citrifolia Musa x paradisiaca Myrciaria dubia 		Dry





		Source information				
Proper name(s)	Common name(s)	Source	Organism	Source	Part(s)	Propagation (a)
		ingredient(s)	group(s)	material(s)	r all(s)	Preparation(s)
				Phyllanthus		
				emblica		
				Prunus		
				armeniaca		
				Prunus avium		
				Prunus cerasus		
				 Prunus persica 		
				 Prunus salicina 	,	
				Punica		
				granatum		
				Pyrus		
				communis		
				Ribes nigrum		
				Rubus idaeus		
				► Rubus		
				occidentalis		
				Sambucus		
				nigra subsp.		
				nigra		
				Vaccinium		
				angustifolium		
				Vaccinium		
				cespitosum Vaccinium		
				corymbosum ▶ Vaccinium		
				macrocarpon ▶ Vaccinium		
				myrtillus		
				 Vaccinium 		
				ovalifolium		
				 Vaccinium 		
				uliginosum		
				 Vaccinium 		
				vitis-idaea		
				 Vitis labrusca 		
				 Vitis vinifera 		
Fruit and vegetable	Fruit and vegetable	N/A	N/A	► Allium	Bulb	Dry
blend	blend			ampeloprasum		
				► Allium cepa	fruit part	
				► Allium porrum		
				► Allium sativum	vegetable	
				Ananas	part	



		Source informati	on			
Proper name(s)	Common name(s)	Source	Organism	Source	Dout(a)	Dramanation(a)
	ingredient(s)	group(s)	material(s)	Part(s)	Preparation(s)	
		_		comosus var.	Fruit	
				comosus	▶ Leaf	
				Apium	 Leaf stalk 	
				graveolens	Root	
				Bergera	 Sprout 	
				koenigii	-	
				Beta vulgaris		
				▶ Bixa orellana		
				Brassica napus		
				▶ Brassica		
				<i>oleracea</i> var.		
				botrytis		
				▶ Brassica		
				oleracea var.		
				capitata		
				▶ Brassica		
				<i>oleracea</i> var.		
				gemmifera		
				▶ Brassica		
				<i>oleracea</i> var.		
				italica		
				Brassica		
				<i>oleracea</i> var.		
				viridis		
				Capsicum		
				annuum		
				Carica papaya		
				► Citrullus		
				lanatus var.		
				lanatus		
				Citrus		
				aurantiifolia		
				► Citrus		
				aurantium		
				 Citrus limon 		
				Citrus paradisi		
				Citrus sinensis		
				Cocos nucifera		
				Cucumis melo		
				Cucurbita pepo		
				► Daucus carota		
				 Fragaria vesca 		
1				Fragaria x		





		Source informat	tion			
Proper name(s)	Common name(s)	Source	Organism	Source	Part(s)	Preparation(s)
		ingredient(s)	group(s)	material(s)	1 an(s)	
				ananassa		
				 Ipomea batatas 		
				► Lantana		
				camara		
				 Litchi chinensis 		
				► Malpighia		
				glabra		
				Malus		
				domestica		
				► Mangifera		
				indica		
				► Morinda		
				citrifolia		
				▶ Moringa		
				oleifera		
				► Musa		
				acuminata		
				► Musa x		
				paradisiaca		
				► Myrciaria		
				dubia		
				► Ocimum		
				tenuiflorum		
				Passiflora		
				edulis		
				Petroselinum		
				crispum		
				Phyllanthus		
				emblica		
				Prunus		
				armeniaca		
				Prunus avium		
				Prunus		
				domestica		
				Prunus persica		
				Prunus salicina		
				Psidium		
				guajava		
				Punica		
				granatum		
				Pyrus		
				communis		
				Raphanus		





		Source information				
Proper name(s)	Common name(s)	Source	Organism	Source	Part(s)	Preparation(s)
		ingredient(s)	group(s)	material(s)	1 art(3)	r reparation(s)
				sativus var.		
				sativus		
				Rubus idaeus		
				Rubus		
				occidentalis		
				Rubus plicatus		
				Sesbania		
				grandiflora		
				► Solanum		
				lycopersicum		
				Spinacia		
				oleracea		
				Vaccinium		
				angustifolium		
				► Vaccinium		
				corymbosum ▶ Vaccinium		
				macrocarpon ▶ Vaccinium		
				myrtillus		
				 Vitis vinifera 		
				Wrightia		
				tinctoria		
				 Zea mays 		
Sprout blend	Sprout blend	N/A	N/A	 Avena sativa 	Sprout	Dry
Sproue orong	Sprout orong			 Brassica 	Sprow	219
				<i>oleracea</i> var.		
				gemmifera		
				▶ Brassica		
				<i>oleracea</i> var.		
				italica		
				 Glycine max 		
				▶ Hordeum		
				vulgare		
				Linum		
				usitatissimum		
				Panicum		
				miliaceum		
				Raphanus		
				sativus		
				Salvia		
				hispanica		
				Triticum		





		Source information				
Proper name(s)	Common name(s)	Source	Organism	Source	Part(s)	Preparation(s)
		ingredient(s)	group(s)	material(s)	r att(s)	r reparation(s)
				aestivum		
Vegetable blend	Vegetable blend	N/A	N/A	 Allium ampeloprasum Allium cepa Allium sativum Apium graveolens Barbarea verna Beta vulgaris Brassica napus Brassica oleracea var. botrytis Brassica oleracea var. capitata Brassica oleracea var. gemmifera Brassica oleracea var. italica Brassica oleracea var. italica Brassica oleracea var. viridis Daucus carota Medicago sativa Petroselinum crispum Raphanus sativus var. sativus Solanum lycopersicum Spinacia oleracea 	vegetable part Fruit Leaf Leaf stalk Root	Dry

Route of administration



Oral

Dosage form(s)

This monograph excludes foods or food-like dosage forms as indicated in the Compendium of Monographs Guidance Document.

Acceptable dosage forms for oral use are indicated in the dosage form drop-down list of the web-based Product Licence Application form for Compendial applications.

If the product contains Active hexose correlated compound (AHCC), the dosage form is restricted to capsules or powder.

Use(s) or Purpose(s)

All products

- ► Source of (an) antioxidant(s)/Provides (an) antioxidant(s)
- Source of (an) antioxidant(s)/Provides (an) antioxidant(s) that help(s) fight/protect (cell) against/reduce (the oxidative effect of/the oxidative damage caused by/cell damage caused by) free radicals

The only claims deemed acceptable in addition to the antioxidant claims are claims supported by the Multi-Vitamin/Mineral Supplements (MVM) monograph and/or by the Marigold Extract and Isolates (Lutein and Zeaxanthin) monograph if the product contains a medicinal ingredient or potency constituent which meets these monographs requirements.

Additional claims (optional)

For vitamins, minerals and/or medicinal ingredients standardized to vitamins, minerals and/or beta-carotene

As per the current Natural and Non-Prescription Health Products Directorate (NNHPD) MVM monograph.

For marigold extracts, lutein and lutein esters (no claim other than antioxidant is supported for zeaxanthin or zeaxanthin esters)

As per the current NNHPD Marigold Extract and Isolates (Lutein and Zeaxanthin) monograph.

Dose(s)

Subpopulation(s)





Adults 18 years and older

Quantity(ies)

Table 2. Dose information presented as maximum daily and single doses with acceptable potency constituents as per the Natural Health Products Ingredients Database (NHPID)

Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Abelmoschus esculentus	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	N/A
Actinidia chinensis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	Vitamin C
Actinidia deliciosa	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits15 g of dried fruits	N/A	N/A
Active hexose correlated compound	Isolate	6 g of AHCC granule 3.6 g of AHCC powder	N/A	N/A
Alaria esculenta	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried thallus and/or whole alga	N/A	N/A
Allium ampeloprasum	Dry, Dry standardized, Powdered, Powdered	100 g of fresh leaves	N/A	beta-CaroteneVitamin C





Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried leaves		
Allium cepa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh bulbs 10 g of dried bulbs	N/A	 Allicin Alliin beta-Carotene Quercetin Vitamin C
Allium porrum	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 20 g of dried leaves	N/A	N/A
Allium sativum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	12 g of fresh bulbs 12 g of dried bulbs	N/A	 Allicin Alliin beta-Carotene Quercetin Selenium
	Standardized extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	12 mg of allicin and/or 27 mg of alliin		
Allium schoenoprasum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 10 g of dried leaves	N/A	QuercetinVitamin C
Aloe vera	Freeze-dried, Fresh, Juice, Juice powdered, Juice powdered, freeze- dried, Powdered,	200 ml or 200 g of fresh leaf gel	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Extract liquid, Extract dry			
Alpinia galanga	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh rhizomes 20 g of dried rhizomes	N/A	Vitamin C
Amorphophallus konjac	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	60 g of fresh roots and/or tubers 10 g of dried roots and/or tubers	N/A	N/A
Amorphophallus paeoniifolius	Dry, Powdered, Non- Standardized Extracts	100 g of fresh roots and/or tubers	N/A	N/A
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried roots and/or tubers		
Ananas comosus var. comosus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 beta-Carotene Iodine Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		
Anethum graveolens	Dry, Powdered, Non- Standardized Extracts	100 g of fresh herb tops	N/A	N/A
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried herb tops		
Aphanizomenon flos-aquae	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1.8 g of dried whole alga	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Apium graveolens	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	 100 g of fresh herb tops, and/or roots and/or tubers 5 g of dried herb tops, and/or roots and/or tubers 	N/A	N/A
Argania spinosa	Oil fixed	15 g of seed oil	N/A	N/A
Aristotelia chilensis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits	N/A	Anthocyanins
Aronia melanocarpa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	 Anthocyanins Proanthocy anidins
Artemisia dracunculus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried leaves	N/A	Vitamin C
Artemisia vulgaris	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	7.2 g of dried herb tops	N/A	N/A
Arthrospira platensis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture,	8 g of whole alga	N/A	 beta-Carotene Vitamin A Vitamin B₆



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Fluid extract, Decoction, Infusion)			
Ascophyllum nodosum	Dry, Dry standardized, Powdered, Powdered Standardized, Non- Standardized Ethanolic Extracts (Dry extract, fluid extract, tincture), Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1 g of dried thallus and/or whole alga	N/A	 Iodine Polyphenols
Asparagus officinalis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh shoots	N/A	beta-CaroteneVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried shoots		
Astaxanthin	Isolate	40 mg	N/A	N/A
Avena sativa	Cooked and dry, Cooked and powdered, Cooked and Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)		N/A	N/A
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	20 g of fresh sprouts 5 g of dried sprouts		
	Fluid extract, Decoction, Infusion)	20 g of fresh herb tops and/or leaves 5 g of dried herb		
		tops and/or leaves		
	Oil fixed	15 g of seed oil		



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Basella alba	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts	100 g of fresh leaves	N/A	Vitamin C
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried leaves		
Berberis vulgaris	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	0.5 g of dried fruits	N/A	N/A
Bergera koenigii	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried leaves	N/A	N/A
Beta vulgaris	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh roots10 g of dried roots	N/A	 beta-Carotene Manganese Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 5 g of dried leaves	N/A	Vitamin C
Brassica juncea	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 10 g of dried leaves	N/A	 Copper Manganese Selenium Zinc



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Brassica nigra	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	3 g of dried seeds	N/A	Selenium
Brassica oleracea var. botrytis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh herb tops 10 g of dried herb tops	N/A	N/A
Brassica oleracea var. capitata	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh herb tops 10 g of dried herb tops	N/A	N/A
Brassica oleracea var. gemmifera	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture,	100 g of fresh sprouts 15 g of dried sprouts	N/A	Quercetin
	Fluid extract, Decoction, Infusion)			
Brassica oleracea var. italica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh herb tops	N/A	ChromiumSeleniumVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried herb tops		
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh sprouts	N/A	N/A
	Fluid extract, Decoction, Infusion)	10 g of dried sprouts		
Brassica oleracea var. oleracea	Dry, Powdered, Non- Standardized Extracts	100 g of fresh herb tops	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	(Dry extract, Tincture, Fluid extract, Decoction Infusion)	10 g of dried herb tops		
Brassica oleracea var. viridis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g fresh leaf 10 g dried leaf	N/A	 Copper Vitamin A Vitamin C Vitamin K₁
Brassica rapa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh roots 10 g of dried roots	N/A	Vitamin C
Camellia sinensis	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	Extracts providing up to 690 mg total catechins and up to 150 mg of caffeine Optional: up to 300 mg EGCG	N/A	 Catechins Caffeine Epigallocate chin 3-gallate (EGCG)
Cannabis sativa	Dry, Powdered	30 g of dried seeds	N/A	N/A
Capparis spinosa	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	N/A
Capsicum annuum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	650 mg of dried fruits	N/A	 beta-Carotene Lutein Vitamin C Zeaxanthin



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Carica papaya	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts	100 g of fresh fruits	N/A	 beta-Carotene Vitamin C Zeaxanthin
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Ceratonia siliqua	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits	N/A	Proanthocyani dins
Chamaemelum nobile	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	12 g of dried flowers	N/A	 beta-Carotene Vitamin C
Chenopodium quinoa	Cooked and dry, Cooked and dry standardized, Cooked and powdered, Cooked and powdered standardized, Cooked and Non- Standardized/ Standardized Extracts (Dry extract, Tincture, Fluid extract.	30 g of dried seeds	N/A	 Biotin Riboflavin Thiamine Vitamin B₆



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Chlorella vulgaris	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	6 g of broken cells	N/A	 beta-Carotene Biotin Lutein Magnesium Selenium Vitamin A Vitamin B₁₂ Vitamin C Vitamin D Vitamin E Vitamin K₁ Zinc
Cicer arietinum	Cooked and dry, Cooked and powdered, Cooked and Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	40 g of dried seeds	N/A	N/A
Cichorium endivia	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 5 g of dried leaves	N/A	Vitamin C
Cichorium intybus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts	10 g of fresh roots 2 g of dried roots	N/A	Vitamin C
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of fresh leaves 1 g of dried leaves	N/A	beta-CaroteneVitamin C
Cinnamomum aromaticum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried stem bark	4 g of dried stem bark	 beta-Carotene Iodine Polyphenols



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Dry, Powdered, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried branch bark and/or trunk bark	4 g of dried branch bark and/or trunk bark	
Cinnamomum verum	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	4 g of dried branch bark and/or shoot bark	N/A	N/A
<i>Citrullus lanatus</i> var. <i>lanatus</i>	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	beta-CaroteneLycopene
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Citrus aurantiifolia	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 Citrus bioflavonoids Vitamin C Zeaxanthin
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Citrus bioflavonoids	Isolate	600 mg	N/A	N/A
Citrus limon	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 beta-Carotene Citrus bioflavonoids Hesperidin
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		 Lycopene Rutin Vitamin C
Citrus maxima	Dry, Dry standardized, Powdered, Powdered standardized, Non-	100 g of fresh fruits	N/A	Citrus bioflavonoids



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Citrus paradisi	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	 beta-Carotene Citrus bioflavonoids Hesperidin Lycopene Vitamin C Zeaxanthin
Citrus reticulata	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	 Citrus bioflavonoids Hesperidin Vitamin C Zeaxanthin
Citrus sinensis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	 Anthocyanins beta-Carotene Citrus bioflavonoids Hesperidin Lycopene Vitamin C Zeaxanthin
Coccinia grandis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	N/A
Cocos nucifera	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion) Oil fixed	20 g of fresh fruits 10 g of dried fruits 15 g of seed endosperm oil	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Coenzyme Q10	Biosynthesis, Synthetic	300 mg	N/A	N/A
Coriandrum sativum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh leaves	N/A	beta-CaroteneVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried leaves		
Cucumis melo subsp. melo var. cantalupo	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Cucumis sativus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	beta-Carotene
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		
Cucurbita maxima	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh fruits	N/A	N/A
	Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Cucurbita	Dry, Powdered, Non-	100 g of fresh fruits	N/A	N/A
moschata	Standardized Extracts (Dry extract, Tincture,	15 g of dried fruits		
	Fluid extract, Decoction, Infusion)	10 g of dried seeds		
Cucurbita pepo	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 beta-Carotene Manganese Vitamin C Zinc



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		
<i>Cucurbita pepo</i> var. <i>pepo</i>	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 5 g of dried fruits	N/A	N/A
Curcuma longa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	9 g of dried rhizomes; For dry extracts maximum ratio is 25:1	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	Extracts providing up to 35% Curcuminoids; Quantity crude equivalent: 9 g of dried rhizomes	N/A	Curcuminoids
Cuminum cyminum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried fruits	N/A	 beta-Carotene Vitamin C
Curcumin	Isolate	1200 mg	400 mg	N/A
Cydonia oblonga	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	 Bioflavonoids Vitamin C



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Cymbopogon citratus	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh herb tops and/or leaves30 g of dried herb tops and/or leaves	N/A	N/A
Cynara cardunculus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried leaves	N/A	Bioflavonoids
Daucus carota	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh roots	N/A	 Anthocyanosi des beta-Carotene Mixed
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried roots		carotenoidsPolyphenolsVitamin AVitamin C
		100 g of fresh leaves	N/A	N/A
		5 g of dried leaves		
Dioscorea alata	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh roots	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried roots		
Diospyros virginiana	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	35 g of dried fruits		
DL-alpha-Lipoic acid	Synthetic	600 mg	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Elaeis guineensis	Oil fixed	15 g of fruit oil	N/A	N/A
Euterpe oleracea	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	14 g of dried fruit flesh and/or dried fruit juice	N/A	N/A
Fagopyrum esculentum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried seeds	N/A	Iodine
Ficus carica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 20 g of dried fruits	N/A	Vitamin C
<i>Foeniculum vulgare</i> subsp. <i>vulgare</i> var. <i>dulce</i>	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh bulbs 10 g of dried bulbs	N/A	N/A
Fragaria virginiana	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	N/A
Fragaria x ananassa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	 beta-Carotene Polyphenols
Fruit blend	Powdered, Extract dry	1 g of dried fruits	N/A	N/A

Antioxidants Page 48 of 99 Canada



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Fruit and vegetable blend	Powdered, Extract dry	1 g of dried fruits and vegetables	N/A	N/A
Fucus vesiculosus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract), Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1 g of dried thallus and/or whole alga	N/A	IodinePolyphenols
Garcinia mangostana	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	CatechinsVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits		
Ganoderma lucidum	Dry, Powdered, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried cultured mycelium, fruiting body, and/or mycelium	N/A	N/A
	Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g dried cultured mycelium, fruiting body, and/or mycelium and up to 40% polysaccharides	N/A	Polysaccharides
	Decoction, Decoction concentrate	15 g of dried cultured mycelium fruiting body, and/or mycelium	N/A	N/A
	Decoction standardized, Decoction concentrate standardized	15 g of dried cultured mycelium, fruiting body, and/or mycelium and up to 40% polysaccharides	N/A	Polysaccharides
Glycine max	Defatted, ground	8 g of defatted soy flour	N/A	N/A
	Powdered	8 g of soy flour		



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of fresh sprouts 5 g of dried sprouts		
Grape seed extract	Standardized Extracts (Dry extract)	475 mg of extract standardized to 70- 85% oligomeric proanthocyanidins (OPC)	N/A	Oligomeric proanthocyani dins
Green coffee bean extract	Standardized Extracts (Dry extract)	1000 mg of extract standardized to 45- 50% chlorogenic acids and up to 4% of caffeine	N/A	 Chlorogenic acids Caffeine
Haematococcus pluvialis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1 g of dried whole alga	N/A	Astaxanthin
Helianthus annuus	Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	35 g of dried seeds	N/A	 Biotin Chlorogenic acids Selenium Thiamine Vitamin E
	Oil fixed	15 g of seed oil	N/A	N/A
Hericium erinaceus	Decoction, Decoction concentrate	12 g of dried fruiting bodies	N/A	N/A
	Decoction standardized, Decoction concentrate standartized	12 g of dried fruiting bodies and up to 40% polysaccharides	N/A	Polysaccharides
Hesperidin	Isolate, Synthetic	500 mg	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Hibiscus sabdariffa	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves5 g of dried leaves	N/A	N/A
Hippophae rhamnoides	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract,	30 g of fresh fruits 5 g of dried fruits	N/A	 beta-Carotene Bioflavonoids Polyphenols Proanthocyani dins Quercetin Vitamin C
Hordeumvulgare	Decoction, Infusion) Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture,	10 g of dried seeds	N/A	 Vitamin E Zeaxanthin beta-Carotene
	Fluid extract, Decoction, Infusion) Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of fresh sprouts 5 g of dried sprouts 100 g of fresh herb tops and/or leaves 20 g of dried herb	N/A	N/A
Ipomoea batatas	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	tops and/or leaves 100 g of fresh roots and/or tubers 20 g of dried roots and/or tubers	N/A	N/A
Irvingia gabonensis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	3.15 g of dried seeds	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Juglans regia	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seeds	N/A	Vitamin C
Lactuca sativa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 5 g of dried leaves	N/A	 Vitamin C Zinc
<i>Lactuca sativa</i> var. <i>crispa</i>	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 5 g of dried leaves	N/A	N/A
Lactuca sativa var. longifolia	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh leaves 5 g of dried leaves	N/A	N/A
Lagenaria siceraria	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 5 g of dried fruits	N/A	Vitamin C
Laminaria digitata	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract), Standardized Extracts (Dry extract, Tincture,	1 g of dried thallus and/or whole alga	N/A	Iodine



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Fluid extract, Decoction, Infusion)			
Laminaria japonica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract), Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1 g of dried thallus and/or whole alga	N/A	Iodine
Lens culinaris	Cooked and dry, Cooked and dry standardized, Cooked and powdered, Cooked and powdered standardized, Cooked and Non- Standardized/ Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seeds		 beta-Carotene Iodine Vitamin C
Lentinula edodes	Dry, Powdered, Non- Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried cultured mycelium, fruiting body, and/or mycelium	N/A	N/A
	Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried cultured mycelium, fruiting body, and/or mycelium and up to 40% polysaccharides	N/A	Polysaccharides
	Decoction, Decoction concentrate	16 g of dried cultured mycelium, fruiting body, and/or mycelium	N/A	N/A
	Decoction standardized, Decoction concentrate standardized	16 g of dried cultured mycelium, fruiting body, and/or mycelium and up to 40%	N/A	Polysaccharides



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
		polysaccharides		
Lepidium meyenii	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	3 g of dried roots and/or hypocotyls	N/A	N/A
Lepidium sativum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh leaves	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried leaves		
Linum usitatissimum	Powdered, Powdered standardized	45 g of dried seeds	22.5 g of dried seeds	beta-Carotene
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract,	20 g of fresh sprouts 5 g of dried sprouts	N/A	N/A
	Decoction, Infusion)			
Lonicera caerulea	Dry, Powdered, Non- Standardized Extracts	100 g of fresh fruits	N/A	N/A
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		
Lutein	Isolate	20 mg	N/A	N/A
Lutein esters	Isolate	40 mg	N/A	N/A
Lycium barbarum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	6 g of dried fruits	N/A	Polysaccharides
Lycopene	Isolate, Synthetic	30 mg	N/A	N/A
L-Carnitine	Isolate, Synthetic	4 g	2 g	N/A
L-Glutathione	Isolate, Synthetic	743 mg	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Malpighia emarginata	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Malpighia glabra	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	beta-CaroteneVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Malus domestica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 beta-Carotene Polyphenols Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		
Malus pumila	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh fruits	N/A	N/A
	Fluid extract, Decoction, Infusion)	5 g of dried fruits		
Mangifera indica	Dry, Dry standardized, Powdered, Powdered standardized, Non-	100 g of fresh fruits	N/A	beta-CaroteneIodineVitamin C
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits		
Medicago sativa	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried herb tops	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Mixed tocopherol concentrate	Isolate	179 mg AT	N/A	N/A
Morinda citrifolia	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits	N/A	N/A
Moringa oleifera	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried leaves and/or seeds	N/A	beta-Carotene
Morus alba	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Musa x paradisiaca	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	25 g of dried fruits		
Myrciaria dubia	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1.5 g of dried fruits	N/A	Vitamin C
N-Acetyl-L- cysteine	Synthetic	600 mg	N/A	N/A
Nasturtium officinale	Dry, Powdered, Non- Standardized Extracts	100 g of fresh herb tops and/or leaves	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried herb tops and/or leaves		
Nelumbo nucifera	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh seeds 25 g of dried seeds	N/A	beta-Carotene
Ocimum tenuiflorum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract) Non-Standardized and Standardized Aqueous Extracts (Dry extract, Decoction, Infusion)	3 g of dried leaves 28 g of dried leaves	N/A	 Riboflavin Thiamine
Olea europaea	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	3.5 g of dried leaves Optional: up to 20.8% oleuropein	N/A	Oleuropein
	Decoction, Decoction concentrate, Decoction	20 g of fresh leaves Optional: up to 20.8% oleuropein	10 g of fresh leaves	
	standardized, Decoction concentrate standardized	10 g of dried leaves Optional: up to 20.8% oleuropein	5 g of dried leaves	
	Infusion, Infusion concentrate, Infusion standardized, Infusion concentrate standardized	30 g of dried leaves Optional: up to 20.8% oleuropein	8 g of dried leaves	



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits 10 g of dried fruits	N/A	beta-CarotenePolyphenolsQuercetin
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)			
	Oil fixed	15 g of fruit oil	N/A	N/A
Ophiocordyceps sinensis	Decoction, Decoction concentrate	9 g of dried stroma	N/A	N/A
	Decoction standardized, Decoction concentrate standardized	9 g of dried stroma and up to 40% polysaccharides	N/A	Polysaccharides
Opuntia ficus- indica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits 5 g of dried fruits	N/A	beta-CaroteneVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	40 g of fresh leaves	N/A	N/A
	Fluid extract, Decoction, Infusion)	3 g of dried leaves		
Origanum vulgare	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1.5 g of dried leaves	N/A	N/A
Oryza sativa	Cooked and dry, Cooked and dry standardized, Cooked and powdered, Cooked and powdered standardized, Cooked and Non-Standardized/ Standardized Extracts	30 g of dried seeds	N/A	 Calcium Chromium Copper Magnesium Manganese Selenium Vitamin E Zinc

Antioxidants Page 58 of 99 Canada



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)			
	Cooked and dry, Cooked and powdered, Cooked and Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seed bran	N/A	N/A
Paecilomyces hepiali	Decoction, Decoction concentrate	9 g of dried cultured mycelium	N/A	N/A
•	Decoction standardized, Decoction concentrate standardized	9 g of dried cultured mycelium and up to 40% polysaccharides	N/A	Polysaccharides
Palmaria palmata	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh thallus and/or whole alga15 g of dried thallus and/or whole alga	N/A	N/A
Panicum miliaceum	Cooked and dry, Cooked and powdered, Cooked and Non-Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seeds	N/A	N/A
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of fresh sprouts 5 g of dried sprouts	N/A	N/A
Passiflora edulis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits25 g of dried fruits	N/A	N/A
Passiflora quadrangularis	Dry, Dry standardized, Powdered, Powdered	100 g of fresh fruits	N/A	Vitamin C



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		
Pastinaca sativa	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh roots and/or tubers20 g of dried roots and/or tubers	N/A	N/A
Persea americana	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 25 g of dried fruits	N/A	 beta-Carotene Vitamin C
Petroselinum	Decoction, Infusion) Dry, Powdered, Non-	40 g of fresh herb	N/A	N/A
crispum	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	tops 5 g of dried herb tops		
Phaseolus vulgaris	Cooked and dry, Cooked and dry standardized, Cooked and powdered, Cooked and powdered standardized, Cooked and Non-Standardized/ Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	35 g of dried seeds	N/A	beta-Carotene
Phoenix dactylifera	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	94 g of fresh fruits 75 g of dried fruits	N/A	 beta-Carotene Iodine Polyphenols Vitamin C



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Phyllanthus emblica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Ethanolic Extracts (Dry extract, Tincture, Fluid extract)	6 g of dried fruits	N/A	Vitamin C
Pimenta dioica	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried fruits	N/A	N/A
Pimpinella anisum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried fruits	N/A	Vitamin C
Pinus pinaster	Standardized Extracts (Dry extract)	450 mg of extract standardized to 65- 75% procyanidins	N/A	Procyanidins
Pisum sativum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh seeds 20 g of dried seeds	N/A	Vitamin C
Porphyra yezoensis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of fresh thallus and/or whole alga 3 g of dried thallus and/or whole alga	N/A	N/A
Propolis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	0.6 g of dried <i>Apis mellifera</i> secretion	N/A	N/A





Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Prunus armeniaca	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 15 g of dried fruits	N/A	 beta-Carotene Iodine Vitamin C
Prunus avium	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 20 g of dried fruits	N/A	N/A
Prunus cerasus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	AnthocyaninsVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		
Prunus domestica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	beta-CaroteneVitamin C
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		
Prunus dulcis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	35 g of dried seeds	N/A	Vitamin C
Prunus persica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 10 g of dried fruits	N/A	 beta-Carotene Vitamin C Zeaxanthin



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Decoction, Infusion)			
Prunus persica var nucipersica	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh fruits 10 g of dried fruits	N/A	N/A
	Fluid extract, Decoction, Infusion)			
Prunus serotina	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh fruits	N/A	N/A
	Fluid extract, Decoction, Infusion)	20 g of dried fruits		
Prunus virginiana	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Quercetin
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	40 g of dried fruits		
Psidium guajava	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 Riboflavin Thiamine Vitamin B₆ Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits		
Punica granatum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits and/or seed arils	N/A	PolyphenolsVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits and/or seed arils		
Pyrus communis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	Vitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Pyrus pyrifolia	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture,	100 g of fresh fruits	N/A	N/A
	Fluid extract, Decoction, Infusion)	10 g of dried fruits		
Quercetin	Isolate, Synthetic	1200 mg	600 mg	N/A
Raphanus sativus	Dry, Powdered, Non- Standardized Extracts	100 g of fresh roots and/or tubers	N/A	N/A
	(Dry extract, Tincture, Fluid extract,	5 g of dried roots and/or tubers		
	Decoction, Infusion)	20 g of fresh sprouts		
		5 g of dried sprouts		
		100 g of fresh leaves		
		5 g of dried leaves		
Rhodiola rosea	Standardized Extracts (Dry extract)	680 mg of dry extract, and 0.8-3% salidroside, and/or 1-6% rosavins	-	RosavinsSalidroside
	Non-Standardized Ethanolic Extracts (Dry extract)	400 mg of dry extract and 2 g dried roots and/or roots and rhizomes	200 mg of dry extract and 1 g of dried roots and/or roots and rhizomes	N/A
	Tincture	1.8 g of dried roots and/or roots and rhizomes	N/A	N/A
Resveratrol	Isolate, Synthetic	1 g	N/A	N/A
Ribes nigrum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 Anthocyanins beta-Carotene Polyphenols Quercetin
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried fruits		 Vitamin C



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Ribes uva-crispa	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 10 g of dried fruits	N/A	beta-CaroteneVitamin C
Rosa canina	Decoction, Infusion) Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 45 g of dried fruits	N/A	 beta-Carotene Lycopene Polyphenols Vitamin C Zeaxanthin
Rosmarinus officinalis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	12 g of dried leaves	N/A	N/A
Royal jelly	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	6 g of fresh <i>Apis</i> <i>mellifera</i> secretion	N/A	N/A
Rubus arcticus	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits10 g of dried fruits	N/A	N/A
Rubus idaeus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	 beta-Carotene Polyphenols
Rubus occidentalis	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Rubus plicatus	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	N/A
Rutin	Isolate, Synthetic	1000 mg	500 mg	N/A
Salvia hispanica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	40 g of dried seeds	N/A	 Calcium Copper Magnesium Molybdenum Phosphorus Thiamine
	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of fresh sprouts5 g of dried sprouts	N/A	N/A
Salvia officinalis	Infusion, Infusion concentrate Tincture	12 g of dried leaves2.25g of dried leaves	N/A	N/A
	Fluid extract	6 g of dried leaves		
Sambucus nigra subsp. nigra	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	18 g of dried fruits	N/A	 Anthocyanins beta-Carotene
Sambucus nigra subsp. canadensis	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	18 g of dried fruits	N/A	 Anthocyanins beta-Carotene
Selenium	Isolate, Synthetic	200 mcg	N/A	N/A
Sesamum indicum	Dry, Powdered, Non-	35 g of dried seeds	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)			
Setaria italica	Cooked and dry, Cooked and powdered, Cooked and Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seeds	N/A	N/A
Solanum lycopersicum	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	Extracts providing up to 30 mg of lycopene	N/A	Lycopene
	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	 beta-Carotene Lutein Rutin Vitamin C
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	5 g of dried fruits		Zeaxanthin
Solanum tuberosum	Dry, Powdered, Non- Standardized Extracts	100 g of fresh roots and/or tubers	N/A	N/A
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dry roots and/or tubers		
Spinacia oleracea	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh leaves	N/A	 Polyphenols Quercetin Riboflavin Rutin
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	10 g of dried leaves		 Vitamin A Vitamin B₆ Vitamin E Vitamin K₁
Sprout blend	Powder, Extract dry	1 g of dried sprouts	N/A	N/A
Squalene	Isolate	1000 mg	N/A	N/A
Syzygium aromaticum	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	2 g of dried flower buds	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Tagetes erecta	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	Extracts providing up to 60% lutein esters and up to 40 mg lutein esters. Optional: up to 5 mg zeaxanthin esters	N/A	 Lutein esters Zeaxanthin esters
Tamarindus indica	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	1.5 g of dried fruits	N/A	Vitamin C
Trigonella foenum-graecum	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of dried seeds	N/A	 beta-Carotene Vitamin C
Triticum aestivum	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion) Oil fixed	 10 g of dried seeds 20 g of fresh sprouts 5 g of dried sprouts 20 g of fresh herb 20 g of fresh herb tops and/or leaves 5 g dried herb tops and/or leaves 15 g of wheat germ oil 	N/A	N/A
Tocotrienol concentrate	Isolate	179 mg AT	N/A	N/A
Ubiquinol	Synthetic	300 mg	N/A	N/A
 Vaccinium corymbosum Vaccinium angustifolium Vaccinium 	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	150 g of fresh fruits20 g of dried fruits	N/A	N/A
pallidum	Dry standardized, Powdered standardized,	Extracts providing up to 40%	N/A	Anthocyanins



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	anthocyanins and not to exceed 195 mg anthocyanins and 150 grams of fresh fruits or 20 grams of dried fruits		
Vaccinium macrocarpon	Fresh, Fresh standardized, Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	30 g of fresh fruits	N/A	 beta-Carotene Iodine Polyphenols Proanthocyani dins Quercetin Vitamin C
	Fresh Powdered	950 ml of fruit juice 1200 mg of dried	N/A N/A	N/A N/A
	Towdered	fruit juice	N/A	N/A
Vaccinium myrtillus	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	75 g of dried fruits	N/A	 Anthocyanins Anthocyanosi des beta-Carotene Polyphenols Quercetin Vitamin C
Vaccinium myrsinites	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 15 g of dried fruits	N/A	N/A
	Decoction, Infusion)			
Vaccinium vitis- idaea	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and	100 g of fresh fruits	N/A	QuercetinVitamin C
	Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	15 g of dried fruits		
Vegetable blend	Powder, Extract dry	1 g	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Vicia faba	Dry, Dry standardized, Powdered, Powdered standardized, Non-	100 g of fresh fruits	N/A	Vitamin C
	Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	25 g of dried fruits		
Vigna radiata var. radiata	Cooked and dry, Cooked and powdered, Cooked and Non- Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	25 g of dried seeds	N/A	N/A
<i>Vigna unguiculata</i> subsp. <i>cylindrica</i>	Standardized Extracts	100 g of fresh seeds	N/A	N/A
	(Dry extract, Tincture, Fluid extract, Decoction, Infusion)	20 g of dried seeds		
Vitamin C	Isolate, Synthetic	18 years: 1,800 mg 19 years and older: 2,000 mg	N/A	N/A
Vitamin E	Isolate	d-alpha Tocopherol 18 years: 800 mg AT 19 years and older: 1,000 mg AT	N/A	N/A
	Synthetic	dl-alpha Tocopherol 18 years: 400 mg AT 19 years and older: 500 mg AT	N/A	N/A
Vitis labrusca	Dry, Powdered, Non- Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 20 g of dried fruits	N/A	N/A
	Decoction, Infusion)	1 6 4 4		NT / A
Red wine extract	Non-Standardized Extracts (Dry extract)	1 g of extract	N/A	N/A
	Standardized Extracts (Dry extract)	1 g of extract providing up to 95% polyphenols	N/A	Polyphenols



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Vitis vinifera	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract,	100 g of fresh fruits 5 g of dried fruits	N/A	 Anthocyanins beta-Carotene Polyphenols Proanthocyani dins Resveratrol Vitamin C
	Decoction, Infusion)	10 g of fresh fruit skin 1 g dry of fruit skin	N/A	 Anthocyanins Bioflavonoids Polyphenols Proanthocyani dins Resveratrol
		5 g of fresh seeds	N/A	 Bioflavonoids Oligomeric proanthocyani dins Polyphenols
		0.5 g of dry seeds		 Proanthocyani dins Procyanidins Vitamin E
Zeaxanthin	Isolate, Synthetic	2.5 mg	N/A	N/A
Zeaxanthin esters	Isolate	5 mg	N/A	N/A
Zea mays	Cooked and dry, Cooked and dry standardized, Cooked and powdered, Cooked and powdered standardized, Cooked and Non-Standardized/ Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	25 g of dried seeds	N/A	 beta-Carotene Iodine Vitamin C Zeaxanthin
Zingiber officinale	. ,	3 g of dried rhizomes	N/A	N/A



Medicinal ingredients	Methods of preparation ¹	Maximum daily dose	Maximum single dose	Potency constituent(s)
Ziziphus jujuba	Dry, Dry standardized, Powdered, Powdered standardized, Non- Standardized and Standardized Extracts (Dry extract, Tincture, Fluid extract, Decoction, Infusion)	100 g of fresh fruits 10 g of dried fruits	N/A	Vitamin C

References: Isolates: Gopalan et al. 2014; NNHPD 2018; CNF 2012; Kupcinskas et al. 2008; Andersen et al., 2007; Kanaze et al. 2007; Nielsen et al. 2006; Nogata et al. 2006; Manach et al. 2003; Erlund et al. 2002; Qureshi et al. 2002; Blostein-Fujii et al. 1999; Ameer et al. 1996; Miettinen and Vanhanen 1994. Other Medicinal ingredients - Fruits, vegetables, mushrooms, algae and other plants: Lim 2015; NNHPD 2015; Zilaee et al. 2014; CNF 2012; Fouladi 2012; Ould Mohamedou et al. 2009; Kimura et al. 2007; Teas et al. 2007; Cherki et al. 2005; Derouiche et al. 2010; Issell et al. 2009; Kimura et al. 2007; Teas et al. 2007; Cherki et al., 2005; Derouiche et al. 2005; Taylor 2005; Callaway 2004; Drissi et al. 2004; Andalla 2003; Beveridge et al. 1999. Fruit and/or vegetable or sprout blends: NNHPD 2018. ¹When the method of preparation 'decoction' or 'infusion' is listed as part of the acceptable methods of preparation in Table 2, the method of preparation 'decoction concentrate' or 'infusion concentrate' is also applicable. This would also apply to standardized extracts.

Potency Information (Optional)

The medicinal ingredients supported by this monograph may be standardized to the potency constituents included in the potency constituent column of Table 2 if any. Note that the quantity crude equivalent (QCE) is mandatory on the PLA form and label for standardized extracts as safety is established based on the QCE unless the dose information in Table 2 is only provided for the standardized extract.

The maximum daily dose and single dose for each potency constituent are listed in Table 3. Note that these limits apply to the total quantity of the potency constituent found in the product (i.e. from all medicinal ingredients standardized to it in the product). This would also include the amount of the potency constituent when found in the product formulation as a separate medicinal ingredient (e.g. a product containing vitamin E as a medicinal ingredient as well as a potency constituent of any another medicinal ingredient).

For vitamins, minerals and beta-carotene, the minimum daily dose of the ingredient or potency constituent should meet the minimum dose established in the NNHPD MVM monograph.





Table 3. Maximum quantities of potency constituents including the maximum dose per day and per single dose

Potency constituents	Maximum daily dose	Maximum single dose
Allicin	12 mg	N/A
Alliin	27 mg	N/A
Anthocyanins	405 mg	N/A
Anthocyanosides	405 mg	N/A
Astaxanthin	40 mg	N/A
beta-Carotene	6,000 mcg	N/A
Bioflavonoids	600 mg	N/A
Caffeine	150 mg	N/A
Catechins	690 mg	N/A
Chlorogenic acids	500 mg	N/A
Citrus bioflavonoids	600 mg	N/A
Curcuminoids	1,200 mg	N/A
Epigallocatechin 3-gallate (EGCG)	300 mg	N/A
Hesperidin	500 mg	N/A
Lutein	20 mg	N/A
Lutein esters	40 mg	N/A
Lycopene	30 mg	N/A
Minerals: Selenium, Calcium,	As per the MVM	N/A
Chromium, Copper, Iodine, Magnesium, Manganese, Molybdenum, Phosphorus,	monograph	
Zinc	< 000	
Mixed carotenoids	6,000 mcg	N/A
Oleuropein	100 mg	N/A
Oligomeric proanthocyanidins	405 mg	N/A
Polyphenols	1,000 mg	N/A
Polysaccharides	180 g	45 g
Proanthocyanidins	405 mg	N/A
Procyanidins	405 mg	N/A
Quercetin	1,200 mg	600 mg
Resveratrol	1,000 mg	N/A
Rosavins	40.8 mg	12 mg
Rutin	1,000 mg	500 mg
Salidroside	20.4 mg	6 mg
Vitamins: Biotin, Riboflavin, Thiamine, Vitamin A Vitamin B Vitamin B	As per the MVM	N/A
Vitamin A, Vitamin B_6 , Vitamin B_{12} , Vitamin C, Vitamin D, Vitamin F	monograph	
Vitamin C, Vitamin D, Vitamin E,		
Vitamin K ₁ Zeaxanthin	2.5 mg	
Zeaxanthin esters	2.5 mg 5 mg	N/A N/A



Ingredient Combinations

All ingredients included in this monograph may be combined together with the following restrictions

- ► The maximum daily dose for beta-carotene (including beta-carotene from mixed carotenoids) in combination with other vitamin A source materials must not exceed the maximum daily dose for vitamin A indicated on the NNHPD MVM monograph. The conversion factor of beta-carotene into vitamin A is 6:1. This factor is also applied to mixed carotenoids.
- ► The maximum daily dose for mixed tocopherols in combination with tocotrienols and other vitamin E source materials must not exceed the maximum daily dose for vitamin E indicated on the NNHPD MVM monograph.
- The total daily dose of each vitamin and mineral must not exceed quantities listed in the NNHPD MVM monograph.
- ► The maximum daily doses of other medicinal ingredient/potency constituents when combined together is presented in Table 4.

Medicinal ingredients/Potency constituents	Maximum daily dose
Ascophyllum nodosum, Fucus vesiculosus, Laminaria	1 g
digitata and/or Laminaria japonica	
Anthocyanins, Anthocyanosides, Oligomeric	405 mg
proanthocyanidins, Proanthocyanidins and/or	
Procyanidins	
Bioflavonoids, Citrus bioflavonoids, Hesperidin,	600 mg
Quercetin and/or Rutin	
Catechins + EGCG	690 mg
Mixed carotenoids + beta-Carotene	6,000 mcg
Oils: Coconut oil, Olive oil, Sunflower oil,	15 g
Wheatgerm oil	
Lutein + Lutein esters*	20 mg
Zeaxanthin + Zeaxanthin esters*	2.5 mg

Table 4. Maximum quantities of medicinal ingredients/potency constituents when combined

*When combined, half the amounts of Lutein esters or Zeaxanthin esters should be taken into consideration to calculate the total amount of Lutein or Zeaxanthin (e.g. 10 mg of lutein and 5 mg of lutein esters from Marigold extract would be equivalent to 10 mg + 2.5 mg = 12.5 mg of total lutein).

Direction(s) for use

Consult Table 5 for medicinal ingredients/potency constituents requiring direction of use statements. The medicinal ingredients/potency constituents in Table 5 are associated with the required numbered statement below or a specific product monograph.

1. As per the respective NNHPD single ingredient monograph.



Table 5. Direction(s) for use

Medicinal ingredients/Potency constituents	Direction(s) for use
Active hexose correlated compound-powder	1
<i>Aloe vera</i> leaf gel (freeze-dried; juice powdered; juice powdered, freeze-dried; powdered)	1
Calcium	As per the MVM monograph
Chlorella vulgaris (Chlorella)	1
Ganoderma lucidum (Reishi)	1
Green tea extract	1
Irvingia gabonensis (African wild mango)	1
Linum usitatissimum (Flaxseed)	1
Lutein esters	As per the Marigold Extract and Isolates monograph
N-Acetyl-L-cysteine	1
Olea europeae leaf (Olive leaf)	1
Phyllanthus emblica (Amla)	1
Quercetin	1
Rhodiola rosea (Rhodiola)	1
Salvia officinalis (Sage)	1
Tagetes erecta (Marigold)	As per the Marigold Extract and Isolates monograph
Zeaxanthin esters	As per the Marigold Extract and Isolates monograph
Zinc	As per the MVM monograph

Duration(s) of use

Consult Table 6 for medicinal ingredients/potency constituents requiring duration of use statements. The medicinal ingredients/potency constituents in Table 6 are associated with the required numbered statements below.

- 1. As per the respective NNHPD single ingredient monograph.
- 2. Consult a health care practitioner/health care provider/health care professional/doctor/ physician for use beyond 3 months (EFSA 2014).

Table	6. Duration	n(s) of use	
			_

Medicinal ingredients/Potency constituents	Duration(s) of use
Astaxanthin (>4 mg/day)	2
Cinnamomum aromaticum (Cassia cinnamon)	1
Grape seed extract	1
Green tea extract	1



Medicinal ingredients/Potency constituents	Duration(s) of use
Lepidium meyenii (Maca)	1
Propolis	1
Quercetin	1
Resveratrol	1
Rutin	1
Salvia officinalis (Sage)	1

Risk information

Consult Table 7 for appropriate risk statements related to each medicinal ingredient/potency constituent. The medicinal ingredients/potency constituents in Table 7 are associated with the required numbered statements below or a specific product monograph.

1. As per the respective NNHPD single ingredient monograph.

Caution(s) and warning(s)

- 2. Consult a health care practitioner/health care provider/health care professional/doctor/ physician prior to use if you are pregnant or breastfeeding.
- 3. Consult a health care practitioner/health care provider/health care professional/doctor/ physician prior to use if you are taking any prescription medication (Brinker 2010).

Contraindication(s)

4. Do not use this product if you are pregnant or breastfeeding (Brinker 2010).

Medicinal ingredients/Potency constituents	Risk information
Active hexose correlated compound - granule	1
Active hexose correlated compound - powder	1
Allium sativum (Garlic)	1
Aloe vera - leaf gel	1
Aphanizomenon flos-aquae	4
Artemisia vulgaris (Mugwort)	1
Arthrospira platensis (Spirulina)	1
Ascophyllum nodosum (Norwegian Kelp)	As per the Kelp products monograph
Astaxanthin	2
Berberis vulgaris - fruit (Common barberry)	4
Cannabis sativa - seed (Hemp)	2

Table 7. Risk information



Medicinal ingredients/Potency constituents	Risk information
Capsicum annuum (Cayenne)	1
Chamaemelum nobile (Roman chamomile)	1
Chlorella vulgaris (Chlorella)	1
Cinnamomum aromaticum (Cassia cinnamon)	1
Cinnamomum verum (Cinnamon)	1
Citrus bioflavonoids	1
Citrus paradisi - fruit (Grapefruit)	3
Coenzyme Q10	1
Curcuma longa (Turmeric)	1
Curcumin	1
Cynara cardunculus (Globe artichoke)	1
DL-alpha-Lipoic acid	1
Euterpe oleracea (Acai)	1
Fucus vesiculosus (Kelpware)	As per the Kelp products monograph
Ganoderma lucidum (Reishi)	1
Grape seed extract	1
Green coffee bean extract	1
Green tea extract	1
Hericium erinaceus (Lion's mane)	As per the Mushrooms monograph
Hesperidin (> 50 mg/day)	2, 3
Irvingia gabonensis (African wild mango)	1
Laminaria digitata (Kelp)	As per the Kelp products monograph
Laminaria japonica (Japanese kelp)	As per the Kelp products monograph
L-Carnitine	1
Lentinula edodes (Shiitake)	As per the Mushrooms monograph
Lepidium meyenii (Maca)	1
L-Glutathione	2
Linum usitatissimum (Flaxseed)	1
Lycium barbarum - fruit (Goji)	2
Medicago sativa (Alfalfa)	1
Manganese	As per the MVM monograph
Mixed tocopherol concentrate + tocotrienols + vitamin $E (> 179 \text{ mg AT/day})$	As per the MVM monograph
N-Acetyl-L-cysteine	1
Ocimum tenuiflorum (Holy Basil)	1
Olea europaea - leaf (Olive leaf)	1
Ophiocordyceps sinensis (Cordyceps)	As per the Mushrooms monograph
Paecilomyces hepiali (Cordyceps)	As per the Mushrooms monograph
Phyllanthus emblica (Amla)	1



Medicinal ingredients/Potency constituents	Risk information
Propolis	1
Quercetin	1
Red wine extract	1
Resveratrol	1
Rhodiola rosea (Rhodiola)	1
Rosmarinus officinalis (Rosemary)	1
Royal jelly	1
Rutin	1
Salvia officinalis (Sage)	1
Sambucus nigra subsp. nigra (Black elder)	As per the Elder monograph
Sambucus nigra subsp. canadensis (American elder)	As per the Elder monograph
Selenium	As per the MVM monograph
Squalene	2
Triticum aestivum (Wheatgrass-herb top/leaf)	2
Trigonella foenum-graecum (Fenugreek)	1
Ubiquinol	1
Vaccinium corymbosum (Blueberry)	1
Vaccinium angustifolium (Blueberry)	1
Vaccinium pallidum (Blueberry)	1
Vaccinium macrocarpon (Cranberry)	1
Vitamin E	As per the MVM monograph
Vitamin K ₁	As per the MVM monograph
Zinc	As per the MVM monograph

Non-medicinal ingredients

Must be chosen from the current NHPID and must meet the limitations outlined in the database.

Storage conditions

Consult Table 8 for appropriate storage condition statements related to each medicinal ingredient/potency constituent. The medicinal ingredients/potency constituents in Table 8 are associated with the required numbered statements below or a specific product monograph.

1. As per the respective NNHPD single ingredient monograph



 Table 8. Storage conditions

Medicinal ingredients/Potency constituents	Storage conditions
Cocos nucifera - oil (Coconut oil)	As per the Multiple Ingredient fixed oil products monograph
Helianthus annuus - oil (Sunflower oil)	As per the Multiple Ingredient fixed oil products monograph
Lutein	As per the Marigold Extract and Isolates monograph
Lutein esters	As per the Marigold Extract and Isolates monograph
Olea europaea - oil (Olive oil)	As per the Multiple Ingredient fixed oil products monograph
Quercetin	1
Rutin	1
Salvia officinalis (Sage)	1
Tagetes erecta (Marigold)	As per the Marigold Extract and Isolates monograph
Triticum aestivum - oil (Wheatgerm oil)	As per the Multiple Ingredient fixed oil products monograph
Zeaxanthin	As per the Marigold Extract and Isolates monograph
Zeaxanthin esters	As per the Marigold Extract and Isolates monograph

Specifications

- ► The finished product specifications must be established in accordance with the requirements described in the NNHPD Quality of Natural Health Products Guide.
- ▶ Each medicinal ingredient must comply with the requirements outlined in the NHPID.
- For medicinal ingredients associated with another NNHPD monograph, specifications indicated in those monographs apply.

Cannabis sativa seeds (Hemp)

Must not contain more than 10 parts per million delta-9-Tetrahydrocannabinol (THC), or phytocannabinoids that have been isolated or concentrated. The determination of the THC concentration must take into account the potential to convert delta-9-tetrahydrocannabinolic acid (THCA) to THC.

References cited

Akhtar MS, Khan S, Bashir S, Salman M. Effect of Lodoicea sechellarum labill (sea coconut) fruit on blood glucose and lipid profile in type 2 diabetic and normal human volunteers. Diabetologia Croatica 2009;38(4):81-93.





Ameer B, Weintraub RA, Johnson JV, Yost RA, Rouseff RL. Flavanone absorption after naringin, hesperidin, and citrus administration. Clinical Pharmacology & Therapeutics 1996;60(1):34-40.

Andallu B, Varadacharyulu NCh. Antioxidant role of mulberry (Morus indica L. cv. anantha) leaves in streptozotocin-diabetic rats. Clinica Chimica Acta 2003;338(1-2):3-10.

Andersen L, Holck S, Kupcinskas L, Kiudelis G, Jonaitis L, Janciauskas D, Permin H, Wadstorm T. Gastric inflammatory markers and interleukins in patients with functional dyspepsia treated with astaxanthin. FEMS Immunology & Medical Microbiology 2007;50:244-248.

Beveridge T, Li TS, Oomah BD, Smith A. Sea Buckthorn Products: Manufacture and Composition. Journal of Agricultural and Food Chemistry 1999;47(9):3480-3488.

Blostein-Fujii A, DiSilvestro RA, Frid D, Katz C. Short term citrus flavonoid supplementation of type II diabetic women: no effect on lipoprotein oxidation tendencies. Free Radical Research 1999;30(4):315-320.

Bouhnik Y, Raskine L, Simoneau G, Paineau D, Bornet F. The capacity of short-chain fructooligosaccharides to stimulate faecal bifidobacteria: a dose-response relationship study in healthy humans. Nutrition journal 2006;5(8):1-6.

Brinker F. Final updates and additions for Herb Contraindications and Drug Interactions, 3rd edition, including extensive Appendices addressing common problematic conditions, medications and nutritional supplements, and influences on Phase I, II & III metabolism with new appendix on botanicals as complementary adjuncts with drugs. Sandy (OR): Eclectic Medical Publications; 2010.

Callaway JC. Hempseed as a nutrition resource: An overview. Euphytica 2004;140:65-72.

Cherki M, Derouice A, Drissi A, El Messal M, Bamou Y, Idrissi-Ouadghiri A, Khalil A, AdlouniA. Consumption of argan oil may have an antiatherogenic effect by improving paraoxonase activities and antioxidant status: Intervention study in healthy men. Nutrition, Metabolism and Cardiovascular Diseases 2005;15(5):352-360.

Chua M, Baldwin TC, Hocking TJ, Chan K. Traditional uses and potential health benefits of Amorphophallus konjac K. Koch ex N.E.Br. Journal of Ethnopharmacology 2010;128(2):268-278.

CNF 2012: Canadian Nutrient File, Food and Nutrition, Health Canada. [Date modified 2012 April 26; Accessed 2015 February 20]. Available from: http://webprod3.hc-sc.gc.ca/cnf-fce/index-eng.jsp

Cummings JH, Southgate DA, Branch WJ, Wiggins HS, Houston H, Jenkins DJ, Jivraj T, Hill





MJ. The digestion of pecin in the human gut and its effect on calcium absorption and large bowel function. British Journal of Nutrition 1979;41(3):477-485.

Derouiche A, Cherki M, Drissi A, Bamou Y, El Messal M, Idrissi-Oudghiri A, Lecerf JM, Adlouni A. Nutritional intervention study with argan oil in man: effects on lipids and apolipoproteins. Annals of Nutrition and Metabolism 2005;49(3):196-201.

Drissi A, Girona J, Cherki M, Godàs G, Derouiche A, El messal M, Saile R, Kettani A, Solà R, Masana L, Adloui A. Evidence of hypolipemiant and antioxidant properties of argan oil derived from the argan tree (Argania spinosa). Clinical Nutrition 2004;23(5):1159-1166.

Dvorkin and Song: Herbs for Benign Prostatic Hyperplasia. Annals of Pharmacotherapy 2002;36(9):1443-1453.

EFSA 2014: European Food Safety Authority. Scientific Opinion: Scientific Opinion on the safety of astaxanthin-rich ingredients (AstaREAL A1010 and AstaREAL L10) as a novel food ingredients. Scientific Opinion. Vol 12(7). [Accessed 2017-07-04]. Available from: http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2014.3757/epdf

Egner PA, Wang JB, Zhu YR, Zhang BC, Wu Y, Zhang QN, Qian GS, Kuang SY, Gange SJ, Jacobson LP, Helzlsouer KJ, Bailey GS, Groopman JD, Kensler TW. Chlorophyllin intervention reduces aflatoxin-DNA adducts in individuals at high risk for liver cancer. Processings of the National Academy of Sciences 2001;98(25):14601-14606.

EMA 2011a: European Medicines Agency (GB). EMA/HMPC/577784/2009. Community herbal monograph on Achillea millefolium L., herba. [2011 July 12; Accessed 2015 February 20]. Available from: http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_-___Community_herbal_monograph/2011/09/WC500115470.pdf.

EMA 2011b: European Medicines Agency (GB). EMA/HMPC/577784/2009. Community herbal monograph on Achillea millefolium L., flos. [2011 July 12; Accessed 2015 February 20]. Available from: http://www.ema.europa.eu/docs/en_GB/document_library/Herbal_-___Community_herbal_monograph/2011/09/WC500115469.pdf.

Erlund I, Silaste ML, Alfthan G, Rantala M, Kesäniemi YA, Aro A. Plasma concentrations of the flavonoids hesperetin, naringenin and quercetin in human subjects following their habitual diets, and diets high or low in fruit and vegetables. European Journal of Clinical Nutrition 2002;56(9):891-898.

Ferruzzi MG, Failla ML, Schwartz SJ. Assessment of degradation and intestinal cell uptake of carotenoids and chlorophyll derivatives from spinach puree using an in vitro digestion and caco-2 human cell model. Journal of Agricultural and Food Chemistery 2001;49(4):2082-2089.

Fouladi, RF. Aqueous extract of dried fruit of Berberis vulgaris L. in acne vulgaris, a clinical trial. Journal of Dietary Supplements 2012;9(4):253-261.





Gopalan Y, Shuaib IL, Magosso E, Ansari MA, Abu Bakar MR, Wong JW, Khan NA, Liong WC, Sundram K, Ng BH, Karuthan C, Yuen KH. Clinical investigation of the protective effects of palm vitamin E tocotrinols on brain white matter. Stroke 2014;45:1422-1428.

Gross J. Pigments in vegetables, chlorophylls and carotenoids. Van nostrand Reinhold: New York, 1991.

Issell BF, Gotay CC, Pagano I, Franke AA. Using quality of life measures in a Phase I clinical trial of noni in patients with advanced cancer to select a Phase II dose. Journal of Dietary Supplements 2009;6(4):347-359.

Kanaze FI, Bounartzi MI, Georgarakis M, Niopas I. Pharmacokinetics of the citrus flavanone aglycones hesperetin and naringenin after single oral administration in human subjects. European Journal of Clinical Nutrition 2007;61(4):472-7.

Kimura T, Nakagawa K, Kubota H, Jojima Y, Goto Y, Yamagishi K, Oita S, Oikawa S. Miyazawa T. Food-grade mulberry powder enriched with 1-deoxynojirimycin suppresses the elevation of postprandial blood glucose in humans. Journal of Agriculture and Food Chemistry 2007;55(14):5869-5874.

Kupcinskas L, Lafolie p, Lignell A, Kiudelis Gm Jonatis, L, Adamonis K, Andersen L, Wadstorm T. Efficacy of the natural antioxidant astaxanthin in the treatment of functional dyspepsia in patients with or without Helicobacter pylori infection: A prospective, randomized, double blind, and placebo-controlled study. Phytomedicine. 2008;15;391-399.

Kumari, D.J. Hypoglycaemic effect of Moringa oleifera and azadirachta indica in type 2 diabetes mellitus. The Bioscan 2010;5(20):211-214.

Lim, T.K. Amorphophallus paeoniifolius. Edible medicinal and non medicinal plants. Volume 9, Modified Stems, Rots, Bulbs 2015:443-453.

Luo J, Van Yperselle M, Rizkalla SW, Rossi F, Bornet FR, Slama G. Chronic consumption of short-chain fructooligosaccharides does not affect basal hepatic glucose production or insulin resistance in type 2 diabetics. Journal of Nutrition 2000;130(6):1572-1577.

Manach C, Morand C, Gil-Izquierdo A, Bouteloup-Demange C, Rémésey C. Bioavailability in humans of the flavanones hesperidin and narirutin after the ingestion of two doses of orange juice. European Journal of Clinical Nutrition. 2003 Feb;57(2):235-242.

Miettinen, TA, Vanhanen, H. Serum concentration and metabolism of cholesterol during rapeseed oil and squalene feeding. The American Journal of Clinical Nutrition 1994;59(2):356-363.

Nielsen IL, Chee WS, Poulsen L, Offord-Cavin E, Rasmussen SE, Frederiksen H, Enslen M, Barron D, Horcajada MN, Williamson G Bioavailability is improved by enzymatic modification of the citrus flavonoid hesperidin in humans: a randomized, double-blind, crossover trial. Journal





of Nutrition 2006;136(2):404-408.

NNHPD 2013: Non-Prescription and Natural Health Products Directorate. Internal evidence on Natural Health Products 2013.

NNHPD 2015: Non-Prescription and Natural Health Products Directorate. Internal evidence on Natural Health Products 2015.

Nogata Y, Sakamoto K, Shiratsuchi H, Ishii T, Yano M, Ohta H. Flavonoid composition of fruit tissues of citrus species. Bioscience, Biotechnology, and Biochemistry 2006;70(1):178-192.

Olesen M, Gudmand-Hoyer E. Efficacy, safety, and tolerability of fructooligosaccharides in the treatment of irritable bowel syndrome. The American Journal of Clinical Nutrition 2000;72(6):1570-1575.

Ould Mohamedou MM, Zouirech K, El Messal M, El Kebbai MS, Chraibi A, Adlouni A. Argan Oil Exerts an antiatherogenic Effect by improving lipids and susceptibility of LDL to oxidation in type 2 diabetes patients. International Journal of Endocrinology 2011. Article ID 747835;1-8.

Pray WS. Non-Prescription Product Therapeutics, 2nd edition. New York (NY): Lippincott Williams & Wilkins; 2006.

Qureshi AA, Sami SA, Salser WA, Khan FA. Dose-dependent suppression of serum cholesterol by tocotrienol-rich fraction (TRF25) of rice bran in hyperchoelsterolemic humans. Atherosclerosis 2002;161(1):199-207.

Scoglio S, Canestari F, Benedetti S, Zolla L. Extracts of aphanizomenon flos aquae and nutritional, cosmetic and pharmaceutical compositions containing the same. US 20100021493 A1. 2010.

Taylor, L. Healing Power of Rainforest Herbs. New York (NY). Square One Publishers; 2005.

Teas J, Braverman LE, Kuzer MS, Pino S, Hurley TG, Hebert JR. Seaweed and soy: companion foods in Asian cuisine and their effects on thyroid function in American women. Journal of Medicinal Food 2007;10(1):90-100.

Teas J, Irhimeh MR, Druker S, Hurley TG, Hébert JR, Savarese TM, Kurzer MS. Serum IGF-1 concentrations change with soy and seaweed supplements in healthy postmenopausal American women. Nutrition and Cancer 2011;63(5):743–748.

USDA 2011: U.S. Department of Agriculture, Agricultural Research Service. 2011: USDA National Nutrient Database for Standard Reference, Release 27. Nutrient Data Laboratory Home Page. [Date modified 2011 December 7; Accessed 2015 February 20]. Available from http://www.ars.usda.gov/ba/bhnrc/ndb.

Zilaee M, Kermany T, Tavalaee S, Salehi M, Ghayour-Mobarhan M, Ferns GA. Barberry treatment reduces serum anti-heat shock protein 27 and 60 antibody titres and high sensitivity c-



reactive protein in patients with metabolic syndrome: a double blind randomized placebocontrolled trial. Phytotherapy Research 2014;28(8):1211-1215.

References reviewed

ATBC (Alpha-tocopherol beta-carotene cancer prevention) study group. The effect of vitamin E and beta carotene on the incidence of lung cancer and other cancers in male smokers. The New England Journal of Medicine 1994;330(15):1029-1035.

Ahmed EA, Omar HM, Elghaffar SKh, Ragb SM, Nasser AY. The antioxidant activity of vitamin C, DPPD and L-cysteine against Cisplatin-induced testicular oxidative damage in rats. Food Chemistry Toxicology 2011;49(5):1115-1121.

Angayarkanni J, Ramkumar KM, Priyadharshini U, Ravendran P. Antioxidant potential of Amorphophallus paeoniifolius in relation to their phenolic content. Pharmaceutical Biology 2010;48(6):659-665.

Amagase, H, Nance, DM. Lycium barbarum increases caloric expenditure and decreases waist circumference in healthy overweight men and women pilot study. Journal of the American Collage of Nutrition 2011;30(5):304-309.

Amagase, H, Sun, B, Borek, C. Lycium barbarum (goji) juice improves in vivo antioxidant biomarkers in serum of healthy adults. Nutrition Research 2009;29:19-25.

Amarowicz R. Squalene: a natural antioxidant? Eur. J. Lipid Sci. Technol 2009;111:411-412.

Amzal H, Alaoui K, Tok S, Errachidi A, Charof R, Cherrah Y, Benjaouad A. Protective effect of saponins from Argania spinosa against free radical-induced oxidative haemolysis. Fitoterapia 2008;79(5):337-344.

Aristatile B, Al-Numair KS, Veeramani C, Pugalendi KV. Effect of carvacrol on hepatic marker enzymes and antioxidant status in D-galactossamine-induced hepatotoxicity in rats. Fundamentals in Clinical Pharmacology 2009;23(6):757-785.

Arvill A, Bodin L. Effect of short-term ingestion of konjac glucomannan on serum cholesterol in healthy men. American Journal of Clinical Nutrition. 1995;61(3):585-589.

Bairati I, Meyer F, Gélinas M, Fortin A, Nabid A, Brochet F, Mercier JP, Têtu B, Harel F, Mâsse B, Vigneault E, Vass S, del Vecchio P, Roy J. A randomized trial of antioxidant vitamins to prevent second primary cancers in head and neck cancer patients. The Journal of National Cancer Institute 2005;97(7):481-488.

Bairati I, Meyer F, Jobin E, Gélinas M, Fortin A, Nabid A, Brochet F, Têtu B. Antioxidant vitamins supplementation and mortality: a randomized trial in head and neck cancer patients. International Journal of Cancer 2006;119(9):2221-2224.





Baroni L, Scoglio S, Benedetti S, Bonetto C, Pagliarani S, Benedetti Y, Rocchi M, Canestrari F. Effect of Klamath algae product ("AFA-B12") on blood levels of vitamin B12 and homocysteine in vegan subjects: a pilot study. International Journal of Vitamin Nutrition Research 2009;79(2):117-123.

Batcioglu K, Yilmaz Z, Satilmis B, Uyumlu AB, Erkal HS, Yucel N, Gunal S, Serin Mand Demirtas H. Investigation of in vivo radioprotective and in vitro antioxidant and antimicrobial activity of garlic (Allium Sativum L.). European Review for Medical and Pharmacological Sciences 2012;16(3 Suppl):47–57.

Benedetti S, Benvenuti F, Pagliarani S, Francogli, Scoglio S, Canestari F. Antioxidant properties of a novel phycocyanin extract from the blue-green alga Aphanizomenon flos-aquae. Life Science 2004;24(19):2353-2362.

Benedetti S, Benvenuti F, Scoglio S, Canestari F. Oxygen radical absorbance capacity of phycocyanin and phycocyanobilin from the food supplement Aphanizomenon flos-aquae. Journal Medicinal Food 2010;13(1):223-237.

Bensky D, Clavey S, Stöger E, Gamble A, editors. Chinese Herbal Medicine: Materia Medica. 3rd edition. Seattle (WA): Eastland Press Inc; 2004.

Berg, JT, Furusawa E. Failure of juice or juice extract from the noni plant (Morinda citrifolia) to protect rats against oxygen toxicity. Hawaii Medical Journal 2007;66(2):41-44.

Bhilwade HN, Tatewaki N, Nishida H, Konishi T. Squalene as novel food factor. Current Pharmaceutical Biotechnology 2010;11(8):875-880.

Bliss DZ, Stein TP, Schleifer CR, Settle RG. Supplementation with gum Arabic fiber increases fecal nitrogen excretion and lowers serum urea nitrogen concentration in chronic renal failure patients consuming a low-protein diet. The American Society for Clinical Nutrition 1996;63(3):392-398.

Booth SL, Golly I, Sacheck JM, Roubenoff R, Dallal GE, Hamada K, Blumberg JB. Effect of vitamin E supplementation on vitamin K status in adults with normal coagulation status. The American Journal of Clinical Nutrition 2004;80(1):143-148.

Botsoglou NA, Florou-Paneri P, Christaki E, Giannenas I, Spais AB. Performance of rabbits and oxidative stability of muscle tissues as affected by dietary supplementation with oregano essential oil. Archives of Animal Nutrition 2004;58(3):209-218.

Boyle SP, Dobson VL, Duthie SJ, Hinselwood DC, Kyle JAM, Collins AR. Bioavailability and efficiency of rutin as an antioxidant: a human supplementation study. European Journal of Clinical Nutrition 2000;54(10):774-784.

Bucheli P, VidalK, Shen L. Gu Z, Zhang C, Miller LE, Wang J. Goji berry effects on macular characteristics and plasma antioxidant levels. Optometry & Vision Science 2011;88(2):257-262.





Cai J, Yang L, He HJ, Xu T, Liu HB, Wu Q, Ma Y, Liu QH, Nie MH. Antioxidant capacity responsible for a hypocholesterolemia is independent of dietary cholesterol in adult rats fed rice protein. Gene 2014;533(1):57-66.

Calucci L, Pinzino C, Zandomeneghi M, Capocchi A, Ghiringhelli S, Saviozzi F, Tozzi S, Galleschi L. Effects of gamma-irradiation on the free radical and antioxidant contents in nine aromatic herbs and spices. Journal of Agricultural and Food Chemistry 2003;51(4):927-934.

Calzuola J, Marsiill V, Gianfranceschi GL. Synthesis of antioxidant in wheat sprouts. Journal of Agricultural and Food Chemistry 2004;52(16):5201-5206.

Calzuola I, Gianfranceschi GL, Marsili V. Comparative activity of antioxidants from wheat sprouts, Morinda citrifolia, fermented papaya and white tea. International Journal of Food Science and Nutrition 2008;57(3-4):168-177.

Céspedes Cl, Alarcon J, Valdez-Morales M, Paredes Lòpez O. Antioxidant activity of an unusual 3-hydroxxyindole derivative isolated from fruits of Aristotelia chilensis (Molina) Stuntz. Zeitschrift fur Naturforschung C 2009;64(9-10):759-762.

Céspedes CL, Alarcon J, Avila JG, El-Hafidi M. Anti-inflammatory, antioedema and gastroprotective activities of Aristotelia chilensis extracts, part 2. Boletin Latinoamericano y del Caribe de Plantas Medicinales y Aromaticas 2010;9(6):432-439.

Chan P, Tomlinson B, Lee CB, Lee YS. Effectiveness and safety of low-dose pravastatin and squalene, alone and in combination, in elderly patients with hypercholesterolemia. Journal of Clinical Pharmacology 1996;36(5):422-427.

Chen HL, Sheu WH, Tai TS, Liaw YP, Chen YC. Konjac supplement alleviated hypercholesterolemia and hyperglycemia in type 2 diabetic subjects—a randomized double blind trial. Journal of American College of Nutrition 2003;22(1):36-42.

Chen S, Shen X, Cheng S, Li P, Du J, Chang Y, Meng H. Evaluation of garlic cultivars for polyphenolic content and antioxidant properties. Public Library of Science One 2013;8(11).

Chou TH, Ding HY, Lin RJ, Liang JY, Liang CH. Inhibition of Melanogenesis and Oxidation by Protocatechuic acid from Origanum vulgare (oregano). Journal of Natural Products 2010;73(11):1767-1774.

Corrigan JJ Jr, Marcus FI. Coagulopathy associated with vitamin E ingestion. The Journal of the American Medical Association 1974;230(9):1300-1301.

Coussement PAA. Inulin and Oligofructose: safe intakes and legal status. The Journal of Nutrition 1999;129:1412S-1417S

CPA 2008: Canadian Pharmacists Association. Compendium of Pharmaceuticals and Specialties: The Canadian Drug Reference for Health Professionals. Toronto (ON): Canadian





Pharmacists Association; 2008

Cruz RCB, Meurer CD, Silva EJ, Schaefer C, Santos ARS, Bella Cruz A, Cechinel Filho V. Toxicity Evaluation of Cucurbita maxima Seed Extract in Mice. Pharmaceutical Biology 2006;44(4):301-303.

Da Silva Marineli R, Moraes EA, Lenquiste SA, Godoy AT, Eberlin MN, Marostica MR. Chemical characterization and antioxidant potential of Chilean chia seeds adn oil (salvia hispanica L.). LWT-Food Science and Technology 2014;59(2-2):1304-1310.

Das B, Antoon R, Tsuchida R, Lotfi S, Morozova O, Farhat W, Malkin D, Koren G, Yeger H, Baruchel S. Squalene selectively protects mouse bone marrow progenitors against cisplatin and carboplatin-induced cytotoxicity in vivo without protecting tumor growth. Neoplasia 2008;10(10):1105-1119.

Das N, Sikder K, Ghosh S, Fromenty B, Dey S. Moringa oleifera Lam. Leaf extract prevents early liver injury and restores antioxidant status in mice fed with high-fat diet. Indian Journal of Experimental Biology 2012;50(6):404-412.

Daud ZA, Tubie B, Sheyman M, Osia R, Adams J, Tubie S, Khosla P. Vitamin E tocotrienol supplementation improves lipid profiles in chronic hemodialysis patients. Vascular Health Risk Management 2013;9:747-761.

De Bock M, Thorstensen EB, Derraik JG, Henderson HV, Hofman PL, Cutfield WS. Human absorption and metabolism of oleuropein and hydroxytyrosol ingested as olive (olea europaea L.) leaf extract. Molecular Nutrition and Food Research 2013;57(11):2079-2085.

Durairaj B, Shakya G, iradje S, Rajagopalan R. Effect of wheatgrass on membrane fatty acid composition during hepatotoxicity induced by alcohol and heated PUFA. Journal of Membrane Biology 2014;247(6):515-521.

Dvorkin and Song: Herbs for Benign Prostatic Hyperplasia. Annals of Pharmacotherapy 2002;36(9):1443-1453.

EFSA 2009: European Food Safety Authority. Scientific Opinion: Scientific Opinion on the substantiation of health claims related to glucomannan and maintenance of normal blood cholesterol concentrations (ID 836, 1560) pursuant to Article 13(1) of Regulation (EC) No 1924/2006 on request from the European Commission. EFSA Journal 7(9): 1258. doi:10.2903/j.efsa.2009.1258. [Accessed 2015-02-20]. Available from: http://www.efsa.europa.eu/en/scdocs/doc/1258.pdf.

EFSA 2012: European Food Safety Authority. Scientific Opinion: Scientific Opinion on the substantiation of health claims related to dried plums of 'prun' cultivars (Prunus domestica L.) and maintenance of normal bowel function (ID 1164, further assessment) pursuant to Article 123(1) of Regulation (EC) No 1924/2006. Scientific Opinion. Vol 10(6). [Accessed 2015-02-20]. Available from: http://www.efsa.europa.eu/en/search/doc/2712.pdf.





El Abbassi A, Khalid N, Zbakh H, Ahmad A. Physiochemical characteristics, nutritional properties, and health benefits of argan oil: a review. Critical Reviews in Food Science and Nutrition 2014;54(11):1401-1414.

Elless MP, Blaylock MJ, Huang JW, Gussman CD. Plants as a natural source of concentrated mineral nutritional supplements. Food Chemistry 2000;71:181-188.

El-Sayed el SM, Abo-salem OM, Abd-Ellah MF, Abd-Alla GM. Hesperidin, an antioxidant flavonoid, Prevents acrylonitrile-induced oxidative stress in rat brain. Journal of Egyptian Society of Toxicology 2007;37:87-93.

Facciola 1998. Cornucopia II: A Source Book of Edible Plants. Vista (CA): Kampong.

Fakurazi, S, Sharifudin SA., Arulselvan P. Moringa oleifera hydroethanolic extracts effectively alleviate acetaminophen-induced hepatotoxicity in experimental rats through their antioxidant nature. Molecules 2012;17(7):8334-8335.

FDA 2009. Agency Response Letter GRAS Notice No. GRN 000293. *CFSAN/Office of Food Additive Safety* 2009. [Accessed 2015 February 10]. Available from: http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/NoticeInventory/ucm196592.ht m

Force M, Sparks WS, Ronzio RA. Inhibition of enteric parasites by emulsified oil of Oregano in vivo. Phytotherapy Research 2000;14:213-214.

Furlong J, Rynders CA, Sutherlin M, Patrie J, Katch FI, Hertel J, Wellman A. Effect of an herbal/botanical supplement on strength, balance, and muscle function following 12 weeks of ressitance training: a placebo controlled study. Journal of International Society of Sports Nutrition 2014;11(23):doi:10.1186/1550-2783-11-23.

Gao R, Wang Y, Wu Z, Ming J, Zhao G. Interaction of barley beta-glucan and tea polyphenols on glucose metabolism in streptozotocin-induced diabetic rats. Journal of Food Science 2012;77(6):H128-H134.

Garcia-Villalba R, Larrosa M, Possemiers S, Tomas-Barberan FA, Espin JC. Bioavailability of phenolics from an oleuropein-rich olive (Olea europaea) leaf extract and its acute effect on plasma antioxidant status: comparision between pre and post menopausal women. European Journal of Nutrition 2014;53(4):1015-1027.

Gbenou JD, Ahounou FJ, Akakpo HB, Laleye A, Yayi E, Gbaguidi F, Baba—Moussa L, Darboux R, Dansou P, Moudachirou M, Kotchoni SO. Phytochemical composition of Cymbopogon citratus and Eucalyptus citriodora essential oils and their anti-inflammatory and analgesic properties on wister rats. Molecular Biology Reports 2013;40(2):1127-1134.

Gironés-Vilaplana A, Villano D, Moreno DA, Garcia-Viguera C. New isotonic drinks with





antioxidant and biological capacities from berries (maqui, acai and blackthorn) and lemon juice. International Journal of Food Science and Nutrition 2013;64(7):897-906.

González Canga A, Fernández Martínez N, Sahagún AM, García Vieitez JJ, Díez Liébana MJ, Calle Pardo AP, Castro Robles LJ, Sierra Vega M. Glucomanano: propiedades y aplicaciones terapéuticas [Glucomannan: properties and therapeutic applications] Nutrición Hospitalaria 2004;19(1):45-50.

Gutzeit D, Baleanu G, Winterhalter P, Jerz G. Vitamin C content in sea buckthorn berries (Hippophae rhamnoides L. ssp. Rhamnoides) and related products: a kinetic study on storage stability and the determination of processing effects. Journal of Food Science 2008;73(9):C615-C620.

Hagen TM, Wierzbicka GT, Siliau AH, Bowman BB, Jones DP. Bioavailability of dietary glutathione: effect on plasma concentration. American Journal of Physiology 1990;259(4Pt1): G524-529.

Harwood M, Danielewska-Nikiel B, Borzelleca JF, Flamm GW, Williams GM, Lines TC. A critical review of the data related to the safety of quercetin and lack of evidence of in vivo toxicity, including lack of genotoxic/carcinogenic properties. Food and Chemical Toxicology 2007;45(11):2179-2205.

Hathan BS, Sangeeta. Osmotic dehydration kinetics of elephant foot yam cubes (Amorphophallus spp.) in sucrose solution. International Journal of Agriculture and Food Science Technology 2013;4(5):481-492.

Heng EC, Karsani SA, Abdul Rahman M, Abdul Hamid NA, Hamid Z, Wan Ngah WZ. Supplementation with tocotrienol-rich fraction alters the plasma levels of apolipoprote in A-I precursor, apolipoprote in E precursor, and C-reactive protein precursor from young and old individuals. European Journal of Nutrition 2013;52(7):1811-1820.

Inoue T, Komoda H, Uchida T, Node K. Tropical fruit camu-camu (Myrciaria dubia) has antioxidative and anti-inflammatory properties. Journal of Cardiology 2008;52(2):127-132.

IOM 2006: Institute of Medicine. Otten JJ, Pitzi Hellwig J, Meyers LD, editors. Institute of Medicine. Dietary Reference Intakes: The Essential Guide to Nutrient Requirements. Washington (DC): National Academies Press; 2006.

Iwasaki T, Tawara A. Effects of astaxanthin on eyestrain induced by accomodative dysfunction. Journal of the Eye 2006;23(6):829-834.

Jaiswal D, Rai PK, Mehta S, Chatterji S, Shukla S, Rai DK, Sharma G, Sharma B, Khair S, Watal G. Role of Moringa oleifera in regulation of diabetes-induced oxidative stress. Asian Pacific Journal of Tropical Medicine 2013;6(6):426-432.

Jastrzebski Z, Leontowicz H, Leontowicz M, Namiesnik J, Zachwieja Z, Barton H, Pawelzick E. Arancibia –Avila P, Toledo F, Gorinstein S. The bioactivity of processed garlic (Allium sativum

Antioxidants Page 89 of 99 Canada



L.) as shown in vitro and in vivo studies on rats. Food and Chemical Toxicology 2007;45(9):1626-1633.

Jenkins DJ, Wesson V, Wolever TM, Jenkins AL, Kalmusky J, Guidici S, Csima A, Josse RG, Wong GS. Wholemeal versus wholegrain breads: proportion of whole or cracked grain and the glycaemic response. BMJ 1988;297:958-60.

Jeong, J.B., Hong. S. C., Jeong, H.J. 3, 4-dihyroxybenzaldehyde purified from the barley seeds (Hordeum vulgare) inhibits oxidative DNA damage and apoptosis via its antioxidant activity. Phytomedicine 2009;16(1):85-94.

Jubert C, Mata J, Bench G, Dashwood R, Pereira C, Tracewell W, Turteltaub K Williams D, Bailey G. Effects of chlorophyll and chlorophyllin on low-dose aflatoxin B(1) pharmacokinetics in human volunteers. Cancer Prevention Research (Philadelphia) 2009;2(12):1015-1022.

Kabuto H, Yamanushi TT, Janjua N, Takayama F, Mankura M. Effects of squalene/squalane on dopamine levels, antioxidant enzyme activity, and fatty acid composition in the striatum of Parkinson's disease mouse model. Journal of Oleo Science 2013;62(1):21-28.

Kaeidi A, Esmaeilli-Mahani S, Sheibani V, Abbasnejad M, Rasoulian B, Hajializadeh Z, Afrazi S. Olive (Olea europaea L.) leaf extract attenuates early diabetic neuropathic pain through prevention of high glucose-induced apoptosis: in vitro and in vivo studies. Journal of Ethnopharmacology 2011;136(1):188-196.

Kamaraj S, Ramakrishnan G, Anandakumar P, Jagan S, Devaki T. Antioxidant and anticancer efficacy of hesperidin in benzo(a)pyrene induced lung carcinogenesis in mice. Invest New Drugs 2009;27(3):214-222.

Kamat JP, Boloor KK, Devasagayam PA. Chlorophyllin as an effective antioxidant against membrane damage in vitro and ex vivo. Biochimica et Biophysica Acta 2000;1487:113-127.

Kamiyama, M, Shibamoto, T. Flavonoids with potent antioxidant activity found in young green barley leaves. Journal of Agricultural and Food Chemistry 2012;60(25):6260-6267.

Karppi J, Rissanen T, Nyyssonen K, Kaikkonen J, Olsson Am Voutilainen S, Salonen J. Effects of Astaxanthin supplementation on lipid peroxidation. International Journal for Vitamin and Nutrition Research 2007;77(1):3-11.

Khatua TN, Padiya R, Karnewar S, Kuncha M, Agawane SB, Kotamraju S, Banerjee SK. Garlic provides protection to mice heart against isoproterenol-induced oxidative damage: role of nitric oxide. Nitric Oxide 2012;27(1):9-17.

Kim YK, Chyun JH. The effects of Astaxanthin supplements on lipid peroxidation and antioxidant status in postmenopausal women. Nutritional Science 2004;7(1):41-46.

Klessen B, Sykura B, Zunft H-J, Blaut M. Effects of inulin and lactose on fecal microflora, microbial activity, and bowel habit in elderly constipated persons. American Journal of Clinical





Nutrition 1997;65(5):1397-1402.

Kolida S, Gibson GR. Prebiotic capacity of inulin-type fructans. The Journal of Nutrition 2007;137:2503S-2506S.

Kuriakose, G.C., Kurup, M.G. Evaluation of renoprotective effect of Aphanizomenon flos-aquae on cisplatin-induced renal dysfunction in rats. Renal Failure 2008;30(7):717-725.

Kirkeskov B, Christensen R, Bugel S, Biliddal H, Danneskioid-Samsoo B, Christensen LP, Andersen JR. The effects of rose hip (Rosa canina) on plasma antioxidative activity and C-reactive protein in patients with rheumatoid arthritis and normal controls : A prospective cohort study. Phytomedicine 2011;18(11):953-958.

Koh, P.H., Mokhtar, R. A., Igbal, M. Antioxidant potential of Cymbopogon citratus extract: alleviation of carbon tetrachloride-induced hepatic oxidative stress and toxicity. Human Experimental Toxicology 2012;31(1):81-91.

Kontogianni VG, Georthanassis IP. Phenolic compounds and antioxidant activity of olive leaf extracts. Natural Products Research 2012; 26(2):186-189.

Kulkarni SD, Tilak JC, Acharya R, Rajurkar NS, Devasagayam TP, Redy AV. Evaluation of the antioxidant activity of wheatgrass (Triticum aestivum L.). as a function of growth under different conditions. Phytotherapy Research 2006;20(3):218-227.

Kumar, A., Chauhan, B.M. Chemical composition and utilization of pearl millet sprouts. Food/Nahrung 1993;37(4):356-363.

Kumar, Shankar, Sainis. Effect of chlorophyullin against oxidative stress in splenic lymphocytes in vitro and in vivo. Biochimica et Biophysica Acta 2004;1672(2):100-111.

Kumar M, Verma V, Nagpal R, Kumar A, Behare PV, Snigh B, Aggarwal PK. Anticarcinogenic effect of probiotic fermented milk and chlorophyllin on aflatoxin-B1-induced liver carcinogenesis in rats British Journal of Nutrition 2012;107(7):1006-1016.

Kushak RI, Christian Drapeau MS, Van Cott EM. Winter HH. Effects of blue-green algae Aphanizomenon flos-aquae on rat plasma lipids. Journal of the American Nutraceutical Association 2000;2(3):59-65.

Kuwabara T, Han KH, Hashimoto N, Yamauchi H, Shimada K, Sekikawa M, Fukushima M. Tartary buckwheat sprout powder lowers plasma cholesterol level in rats. Journal of Nutritional Science and vitaminology (Tokyo) 2007;53(6):501-507.

Lagouri, V., Boskou, D. Nutrient antioxidants in oregano. International Journal of Food Science and Nutrition 1996;47(6):493-497.

Larmo P, Alin J, Salminen E, Kallio H, Tahvonen R. Effects of sea buckthorn berries on infections and inflammation: a double-blind, randomized, placebo-controlled trial. European





Journal of clinical nutrition 2007;62:1123-1130

Lee YH, Choo C, Watawana MI, Jayawardena N, Waisundara VY. An appraisal of eighteen commonly consumed edible plants as functional food based on their antioxidant and starch hydrolase inhibitory activities. Journal of the Science of Food and Agriculture 2014;DOI: 10.1002/jsfa.7039.

Lee S, Han KH, Nakamura Y, Kawakami S, Shimada K, Hayakawa T, Onoue H, Fukushima M. Dietary L-cysteine improves the antioxidative potential and lipid metabolism in rats fed a normal diet. Bioscience, biotechnology & Biochemistry 2013;77(7):1430-1434.

Lee S-P, Mar G-Y, Ng L-T. Effects of tocotrienol-rich fraction on exercise endurance capacity and oxidative stress forced swimming rats. European Journal of Applied Physiology 2009;107:587–595;doi:10.1007/s00421-009-1159-6.

Li T, Beveridge T. Sea Buckthorn: Production and utilization. Chapter 11. Chemical composition and some physical properties. NRC Research Press. 2003.

Liang, C.H., Chou, T.H., Ding, H.Y. Inhibition of melanogensis by a novel origanoside from Origanum vulgare. Journal of Dermatological Science 2010;57(3):170-177.

Lila MA, Ribnicky DM, Rojo LE, Rojas-Silva P, Oren A, Havenaar R, Janle EM, Raskin I, Yousef GG, Grace MH. Complementary approaches to gauge the bioavailability and distribution of ingested berry polyphenolics. Journal of Agriculture and Food Chemistry 2012;60(23):5763-5771.

Lin LY, Peng CC, Yang YL, Peng RY. Optimization of bioactive compounds in buckwheat sprouts and their effect on blood cholesterol in hamsters. Journal of Agriculture and Food Chemistry 2008;56(4):1216-1223.

Lim JH, Park KJ, Kim BK, Jeong JW, Kim HK. Effect of salinity stress on phenolic compounds and carotenoids in buckwheat (Fagopyrum esculentum M.) sprout. Food Chemistry 2012;135(3):1065-1070.

Liu CL, Chen YS, Tang JH, Chiang BH, Hsu CK. Trace element water improves the antioxidant activity of buckwheat (fagopyrum esculentum Moench) sprouts. Journal of Agriculture and Food Chemistry 2007;55(22):8934-8940.

Lonn E, Bosch J, Yusuf S, Sheridan P, Pogue J, Arnold JM, Ross C, Arnold A, Sleight P, Probstfield J, Dagenais GR; HOPE and HOPE-TOO Trial Investigators. Effects of long-term vitamin E supplementation on cardiovascular events and cancer: a randomized controlled trial. The Journal of the American Medical Association 2005;293(11):1338-1347.

Lorenz, R. T., Cysewski, G.R. Commercial potential for Haematococcus microalgae as a natural source of astaxanthin. Trends in Biotechnology 2000;18(4):160-167.





Madhurima P, Kuppast IJ, Mankani. A review on Amorphophallus Paeoniifolius. International Journal of Advanced Scientific Research and Technology 2012;2(2):99-111.

Malmstein C, Lignell A. Dietary supplementation with Astaxanthin-rich algal meal improves strength endurance - a double blind placebo controlled study on male students. Carotenoid Science 2008;13:20-22.

Mandukhail, S.R., Aziz, N., Gilani, A-H. Studies on antidyslipidemic effects of Morinda citrifolia (Noni) fruit, leaves and root extracts. Lipids in Health and Disease 2010;9(88):1-6.

Maniam S, Mohamed N, Shuid AN, Soelaiman IN. Palm tocotrienol exerted better antioxidant activities in bone than a-tocopherol. Basic & Clinical Pharmacology & Toxicology 2008;103:55–60. doi:10.1111/j.1742-7843.2008.00241.x.

Mansoor Ahmed, SK., Manoj, J. Anti obesity activity of Coccinia Indica in female rats fed with cafeteria and atherogenic diets . Scholars Research Library 2012;4(5):1480-1485.

Marteau P, Jacobs H, Cazaubiel M, Signoret C, Prevel J-M, Housez B. Effects of chicory inulin in constipated elderly people: a double-blind controlled trial. International of Food Sciences and Nutrition 2011;62(2):164-170.

Martino F, Martino E, Morrone F, Carnevali E, Forcone R, Niglio T. Effect of dietary supplementation with glucomannan on plasma total cholesterol and low density lipoprotein cholesterol in hypercholesterolemic children. Nutrition, Metabolism and Cardiovascular Diseases 2005 Jun;15(3):174-180.

Matralis, AN., Kourounakis, AP. Design of novel potent antihyperlipidemic agents with antioxidant/anti-inflammatory properties: exploiting phenothiazine's strong antioxidant activity. Journal of Medicinal Chemistry 2014;57(6):2568-2581.

Mazumder PM., Sasmal D, Nambi RA. Antiulcerogenic and antioxidant effects of Coccinia grandis (Linn.) Voigt leaves on aspirin-induced gastric ulcer in rats. Natural Product Radiance 2008;7(1):15-18.

McGuffin M, Gardner Z. editors. American Herbal Products Association's Botanical Safety Handbook. 2nd edition. Boca Raton (FL): CRC Press; 2013.

Menne E, Guggenbuhl, Roberfroid M. Fn-type chicory inulin hydrolysate has a prebiotic effect in humans. Journal of Nutrition 2000;130:1197-1199.

Meyer F, Bairati I, Fortin A, Gélinas M, Nabid A, Brochet F, Têtu B. Interaction between antioxidant vitamin supplementation and cigarette smoking during radiation therapy in relation to long-term effects on recurrence and mortality: A randomized trial among head and neck cancer patients. International Journal of Cancer 2008;122(7):1679-1683.

Mohan-Kumari HP, Dhale MA, Akhilender Naidu K, Vijayalakshmi G. Antioxidant effect of red mould rice in hypercholesterolemic wistar male rats. Cell Biochemistry and Functions

Antioxidants Page 93 of 99 Canada



2011;29(7):597-602.

Montgomery RM, Nachtigall HB. Oral administration of chlorophyll fractions for body deodorization. Postgrad Med 1950;8(5):401–404.

Muhammad N, Luke DA, Shuid AN, Mohamed N, Soelaiman IN. Tocotrinol supplementation in postmenopausal osteoporosis: evidence from a laboratory study. Clinics (Sao Paulo) 2013;68(10):1338-1343.

Munasinghe MA, Abeysena C, Yaddehige IS, Vidanapathirana T, Piyumal KP. Blood Sugar Lowering Effect of Coccinia grandis (L.) J. Voigt: Path for a new drug for diabetes mellitus. Journal of Diabetes Research 2011;Article ID 978762.

Nagaki Y, Mihara M, Tsukuhara H, Ohno S. The supplementation effect of Astaxanthin on accomodation and asthenopia. Journal of Clinical Theapeutics and Medicines 2006;22(1).

Nakamura A, Nakata D, Isobe R, Honma C, Otaka Y, Sakurai S, Abematsu Y, Shimada Y. Changes in visual function following peroral Astaxanthin. Japanese Journal of Clinical Ophthalmology 2004;58(6):1051-1054.

Nandave M, Oiha SK, Joshi S, Kumari S, Arya DS. Moringa oleifera leaf extract prevents isoproterenol-induced myocardial damage in rats: evidence for an antioxidant, antiperoxidative, and cardioprotective intervention. Journal of Medicinal Foods 2009;12(1):47-55.

O'Byrne DJ, Devaraj S, Grundy SM, Jialal I. Comparison of the antioxidant effects of concord grape juice flavonoids alpha-tocopherol on markers of oxidative stress in healthy adults. The American Journal of Clinical Nutrition 2002;76(6):1367-1374.

Oh HY, Kim SS, Chung HY, Yoon S. Isoflavone supplements exert hormonal and antioxidant effects in postmenopausal Korean women with diabetic retinopathy. Journal of Medicinal Foods 2005;8(1):1-7.

Omenn GS, Goodman GE, Thornquist MD, Balmes J, Cullen MR, Glass A, Keogh JP, Meyskens FL, Valanis B, Williams JH, Barnhart S, Hammar S. Effects of a combination of beta carotene and vitamin A on lung cancer and cardiovascular disease. New England Journal of Medicine 1996;334(18):1150-1155.

Owen RW, Mier W, Glacosa A, Hull WE. Spiegelhalder B, Bartsch H. Phenolic compounds and squaleen in olive oils: the concentration and antioxidant potential of total pehnols, simple phenols, secoiridoids, lignansand squalene. Food Chemistry and Toxicology 2000;38(8):647-659.

Ozgen M, Wyzgoski FJ. Tulio AZ, Gazula A, Miller AR, Scheerens JC, Reese RN, Wright SR. Antioxidant capacity and phenolic antioxidants of midwestern black raspberries grown for direct markets are influenced by production site. Horticultural Science, 2008;43:2039-2047.

Panda, S., Kar, A. Antithyroid effects of naringin, hesperidin and rutin in L-T4 induced



hyperthyroid rats : Possible mediation through 5'DI activity. Pharmacological Reports 2014;66(6):1092-1099.

Parejo I, Viladomat F, Bastida J, Rosas-Romero A, Flerlage N, Burillo J, Codina C. Comparison between the radical scavenging activity and antioxidant activity of six distilled and nondistilled Mediterranean herbs and aromatic plants, Journal of Agricultural and Food Chemistry 2002;50(23):6682-6890.

Parhiz H, Roohbakhsh A, Soltani F, Rezaee R. Iranshahi M. Antioxidant and anti-inflammatory properties of the citrus flavonoids hesperidin and hesperetin : An updated review of their molecular mechanisms and experimental models. Phytotherapy Research 2014. DOI 10.1002/ptr.5256.

Park KK, Park JH, Jung YJ, Chung WY. Inhibitory effects of chlorophyllin, hemin and tetrakis (4-benzoic acid) porphyrin on oxidative DNA damage and mouse skin inflammation induced by 12-I-tetradecanoylphorbol-13-acetate as a possible anti-tumor promoting mechanism. Mutation Research 2003;542(1-2):89-97.

Park JH, Jung JH, Yang JY, Kim HS. Olive leaf down-regulates the oxidative stress and immune dysregulation in streptozotocin-induced diabetic mice. Nutrition Research 2013;33(11):942-951.

Parisi V, Tedeschi M, Gallinaro G, Varano M, Saviano S, Piermarocchi S. Carotenoids and antioxidants in age-related caculopathy Italian study: multifocal electroretinogram modificiations after 1 year. Opthalmology 2008;115(2) 324-333.

Pray WS. Non-Prescription Product Therapeutics, 2nd edition. New York (NY): Lippincott Williams & Wilkins; 2006.

Rahim SM, Taha Em, Mubark ZM, Aziz SS, Simon KD, Mazlan AG. Protective effect of Cymbopogon citratus on hydrogen peroxide-induced oxidative stress in the reproductive system of male rats. Systems Biology in Reproductive Medicine 2013;59(6):329-336.

Rahmatullah M, Azam MN, Khatun Z, Seraj S, Islam F, Rahman MA, Jahan S, Aziz MS. Medicinal plants used for treatment of diabetes by the Marakh sect of the Garo tribe living in Mymensgh district, Bangladesh. African Journal of Traditional and Complementary Alternative Medicine 2012;9(3):380-385.

Ramamoorthy P, Bono A. Antioxidant Activity, Total phenolic and flavonoid content of Morinda Citrifolia fruit extracts from various extraction processes. Journal of Engineering Science and Technology 2007;2(1):70-80.

Ramires PR, Ji LL. Glutathione supplementation and training increases myocardial resistance to ischemia-reperfusion in vivo. Heart and Circulatory Physiology – American Journal of Physiology 2001;281:H679-H688.

Rivera CA, Ferro CL, Bursua AJ, Gerber BS. Probable interaction between Lycium bararum





(goji) and warfarin. Pharmacotherapy 2012;32(3).

Rubilar M, Jara C, Poo Y, Acevedo F, Gutierrez C, Sineiro J, Shene C. Extracts of Maqui (Aristotelia chilensis) and Murta (Ugni molinae Turcz.): sources of antioxidant compounds and alpha-glucosidase/alpha-amalyase inhibitors. Journal of Agriculture and Food Chemistry 2011;59(5):1630-1637.

Sairanen U, Pijrainen L, Nevala R, Korpela R. Yoghurt containing galacto-oligosaccharides, prunes and linseed reduces the severity of mild constipation in elderly subjects. European Journal of Clinical Nutrition 2007;61(12):1423-1428.

Schaeffer D, Malpas PB, Barton LL. Risk assessment of microcystin in dietary Aphanizomenon flos-aquae. Ecotoxicology and Environmental Safety 1999;44:73-80.

Seeram, N.P. Berry fruits: compositional elements, biochemical activities, and the impact on their intake on human health, performance, and disease. Journal of Agriculture and Food Chemistry 2008;56(3):627-629.

Sen CK., Atalay M, Hanninen O. Exercise-induced oxidative stress: glutathione supplementation and deficiency. Journal of Applied Physiology (1985) 1994;77(5):2177-2187.

Shah JG, Patel BG, Patel SB, Patel RK. Antiurolithiatic and antioxidant activity of Hordeum vulgare seeds on ethylene glycol-induced urolithiasis in rats. Indian Journal of Pharmacology 2012;44(6):672-677.

Sharma D, Kumar SS, Sainis KB. Antiapoptotic and immunomodulatory effects of chlorophyllin. Molecular Immunology 2007;44(4):347-359.

Shi X, Liao S, Mi H, Guo C, Qi D, Li F, Zhang C, Yang Z. Hesperidin prevents retinal and plasma abnormalities in streptozotocin-induced diabetic rats. Molecules 2012;17:12868-12881.

Singh, Anuradha., Wadhwa, Neeraj. A review on multiple potential of Aroid: Amorphophallus paeoniifolius. International Journal of Pharmaceutical Sciences Review and Research 2013;24(1):55-60.

Sinha M, Das DK, Bhattacharjee S, Majumdar S, Dey S. Leaf extract of Moringa oleifera prevents ionizing radiation-induced oxidative stress in mice. Journal of Medicinal Foods 2011;14(10):1167-1172.

Sour S, Belarbi M, Khaldi D, Benmansour N, Sar N, Nani A, Chemat F, Visioli F. Argan oil improves surrogate markers of CVD in humans. British Journal of Nutrition 2012;107(12):1800-1805.

Sreelatha, S., Padma, P.R. Antioxidant activity and total phenolic content of Moringa oleifera Leaves in two stages of maturity. Plant Foods in Human Nutrition 2009;64:303-311.





Srinivasan, K. Antioxidant potential of spices and their active constituents. Critical Reviews in Food Science and Nutrition 2014;54(3):352-372.

Stone-Dorshow T, Levitt MD. Gaseous response to ingestion of a poorly absorbed fructooligosaccharide sweetener. American Journal of Clinical Nutrition 1987;46:61-65.

Strandbert TE, Tilvis RS, Miettinen TA. Metabolic variables of cholesterol during squalene feeding in humans : comparison with cholestyramine treatment. Journal of Lipids Research 1990;31(9):1637-1643.

Swain JH, Alekel DL, Dent SB, Peterson CT, Reddy MB. Iron indexes and total antioxidant status in response to soy protein intake in perimenopausal women. American Journal of Clinical Nutrition 2002;76(1):165-171.

Tamilselvam K, Nataraj J, Janakiraman Y, Manivasagam T, Mohammed Essa M. Antioxidant and anti-inflammatory potential of hesperidin against 1-methyl-4-phenyl-1, 2, 3, 6-tetrahydropyridine-induced experimental Parkinson's disease in mice. Neurological Diseases 2013;3(3):294-302.

Tou JC, Jaczynski J, Chen Y-C. Krill for human consumption: nutritional value and potential health benefits. Nutrition Reviews 2007;65(2):63-67.

Touvier M, Kess E, Clavel-Chapelon F, Boutron-Rualt MC. Dual association of beta-carotene with risk of tobacco-related cancers in a cohort of French women. Journal of the National Cancer Institute 2005; 97(18):1338-1344.

Tulio, Artemio Z.; Reese, R. Neil; Wyzgoski, Faith J.; Rinaldi, Peter L.; Fu, Ruiling; Scheerens, Joseph C.; Miller, A. Raymond "Cyanidin 3-Rutinoside and Cyanidin 3-Xylosylrutinoside as primary phenolic antioxidants in black raspberry". Journal of Agricultural and Food Chemistry 2008;56(6):1880-1888.

Umamaheswari M, Asokkumar K, Somasundaram A, Sivashanmugam T, Subhanmugam T, Subhadradevi V, Ravi TK. Xanthin oxidase inhibitory activity of some Indian medical plants. Journal of Ethnopharmacology 2007;109(3):547-551.

US FDA. Deodorant drug products for internal use for over-the-counter human use; Final Monograph. Department of Health and Human Services 1990;55(92):19862-19866.

Vasgues CA, Rossetto S, Halmenschlager G, Linden R, Heckler E, Fernandez MS, Alonso JL. Evaluation of the pharmacotherapeutic efficacy of Garcinia cambogia plus Amorphophalllus konjac for the treatment of obesity. Phythotherapy Research 2008;22(9):1135-1140.

Vazguez-Velasco M, Gonzalez-Torres L, Lopez-Gasco P, Bastida S, Benedi J, Sanchez-Reus MI, Gonzalez-Munoz MJ, Sanchez Muniz FJ. Liver oxidation and inflammation in Fa/Fa rats fed glucomannan/spirulina-surimi. Food Chemistry 2014;159:215-221.





Venkateswaran S, Pari L. Effect of Coccinia indica leaves on antioxidant status in streptozotocin-induced diabeteic rats. Journal of Ethnopharmacology 2003;84(2-3):163-168.

Venugopal, S, Iyer, U.M. Management of diabetic dyslipidemia with subatmospheric dehydrated barley grass powder. International Journal of Green Pharmacy 2010;4(4):251-256.

Viswanatha GL, Shylaua H, Sandeep Rao KS, Santhosh Kumar VR, Jagadeesh M. Hesperidin ameliorates immobilization-stress-induced behavioral and biochemical alterations and mitochondrial dysfunction in mice by modulating nitergic pathway. ISRN Pharmacology 2012; Article ID: 479570.

Walsh DE, Yaghoubian V, Behforooz A. Effect of glucomannan on obese patients: a clinical study. International Journal of Obesity 1984;8(4):289-293.

Ward NC, Wu JH, Clarke MW, Puddey IB, Burke V, Croft KD, Hodgson JM. The effect of vitamin E on blood pressure in individuals with type 2 diabetes: a randomized, double-blind, placebo-controlled trial. Journal of Hypertension 2007;25(1):227-234.

Wasantwisut E, Viriyapanich T. Ivy Gourd (Coccinia grandis Voigt, Coccinia cordifolia, Coccinia indica) in human nutrition and traditional applications. Plants in Human Health and Nutrition Policy 2003;9:60-66.

Wilmsen, P. K, Spada, D.S., Salvador, M. Antioxidant activity of the flavonoid hesperidin in chemical and biological systems. Journal of Agricultural and Food Chemistry 2005;53:4757-4761.

Winterbone MS, Sampson MJ, Saha S, Hughes JC, Hughes DA. Pro-oxidant effect of alphatocopherol in patients with type 2 diabetes after an oral glucose tolerance test-a randomised controlled trial. Cardiovascular Diabetology 2007;6:8.

Witschi A, Reddy S, Stofer B, Lauterburg BH. The systemic availability of oral glutathione. European Journal of Clinical Pharmacology 1992;43(6):667-669.

Wu WT, Chen HL. Konjac glucomannan and inulin systematically modulate antioxidant defense in rats fed a high-fat fiber-free diet. Journal of Agriculture and Food Chemistry 2011;59(17):9194-9200.

Yang LJ, Wan R, Shen JQ, Shen J, Wang XP. Effect of L-cystiene on remote organ injury in rats with severe acute pancreatitis induced by bile pancreatic duct obstruction. Hepatobiliary & Pancreatic Diseases International 2013;12(4):428-435.

Yang B, Kalimo KO, Tahvonen RL, Mattila LM, Katajisto JK, Kallio HP. Effect of dietary supplementation with sea buckthorn (Hippophae rhamnoides) seed and pulp oils on the fatty acid composition of skin glycerophospholipids of patients with atopic dermatitis. Journal of Nutritional Biochemistry 2000;11(6):338-340.





Yang B, Kalimo KO, Mattila LM, Kallio SE, Katajsto JK, Pettola OJ, Kallio HP. Effects of dietary supplementation with sea buckthorn (Hippophae rhamnoides) seed and pulp oils on atopic dermatitis. Journal of Nutritional Biochemistry 1999;10(11):622-630.

Yi B, Kasai H, Lee HS, Kang Y, Park JY, Yang M. Inhibition by wheat sprout (Triticum aestivum) juice of bisphenol A-induced oxidative stress in young women. Mutation Research 2011;724(1-2):64-68.

Yousofi M, Saberivand A, Becker LA, Karimi I. The effects of Cannabis sativa L. seed (hemp seed) on reproductive and neurobehavioural end points in rats. Developmental Psychobiology 2011;53(4):402-412.

Yu YM, Chang WC, Chang CT, Hsieh CL, Tsai CE. Effects of young barley leaf extract and antioxidative vitamins on LDL oxidation and free radical scavenging activities in type 2 diabetes. Diabetes Metabolism 2002;28(2):107-114.

Yu YM, Wu CH, Tseng YH, Tsai CE, Chang WC. Antioxidative and hypolipidemic effects of barley leaf essence in a rabbit model of atherosclerosis. Japan Journal of Pharmacology 2002;89(2):142-148.

Zhang de L, Hu CX, Li DH, Liu YD. Lipid peroxidation and antioxidant responses in zebrafish brain induced by Aphanizomenon flos-aquae DC-1 aphantoxins. Aquatic Toxicology 2013;144-145.

Zhang YK, Wang J, Liu L, Chang RC, So KF, Ju G. The effect of Lycium barbarum on spinal cord injury, particularly its relationship with M1 and M2 macrophage in rats. BMC Complementary and Alternative Medicine 2013;13(67):1-12.

Zhang H, Li J, Xia J, Lin S. Antioxidant activity and physicochemical properties of an acidic polysaccharide from Morinda officinalis. International Journal of Biological Macromolecules 2013;58:7-12.

Zhu J, Liu W, Yu J, Zou S, Wang J, Yao W, Gao X. Characterization and hypoglycemic effect of a polysaccharide extracted from the fruit of Lycium barbarum L. Carbohydrate Polymers 2013;98(1):8-16.

