



THE  
**COLOR**  
OF **FOOD**

WHOLE FOOD NUTRITION AND THE  
IMPORTANCE OF PHYTONUTRIENTS

**wholisticmatters**®

Powered by **Standard Process**®

# The Color of Food and the Importance of Whole Food Nutrition

One of the most problematic aspects of the modern diet is the abundance of energy-dense but nutrient-poor foods. These foods provide a high amount of calories per serving without an equally beneficial amount of vitamins and minerals. Overconsumption of these nutrient-poor foods is a driving factor in the increasing rates of metabolic diseases<sup>1</sup> and contributes significantly to increasing levels of nutrient inadequacies.<sup>2</sup>

**The solution to this nutritional deficit is a whole-foods diet that is nutrient-dense and nutrient-diverse, maximizing the health benefits of whole foods.** Nutrient-dense foods contain a high concentration of essential nutrients, including vitamins, minerals, amino acids, and other beneficial compounds such as fiber, relative to their calorie content. Nutrient-dense whole foods deliver optimal nourishment without excessive calories.

Focusing on nutrient diversity is equally important because no single food can provide all the key micronutrients the body needs to thrive. Diversifying nutrient intake can be achieved by consuming different micronutrients from a variety of nutrient-dense foods. Eating the rainbow – striving to include as many beautifully colored fruits and vegetables as possible – is one of the most beneficial strategies for ensuring that a diet is both nutrient-dense and nutrient-diverse.



## The Whole Food Advantage

The “whole food advantage” highlights the remarkable benefits of consuming vibrant, unprocessed foods that teem with bioactive phytonutrients. This concept embraces the idea that certain phytonutrients can create a powerful synergy when combined on our plates, amplifying their health-boosting properties.<sup>3</sup> At the heart of the whole food advantage lies the incredible truth that a single plant can offer a rich tapestry of phytonutrients, each contributing unique health benefits, all packed into one nourishing source.

## The Whole Food Matrix

The whole food matrix highlights the integrated nature of nutrition where nutrients exist as complex interrelated compounds rather than isolated substances. The matrix is characterized by the chemical dynamics of food, including how various components are structured and interact. The matrix consists of phospholipids, nutrients, phytonutrients (bioactive compounds), minerals, and more.<sup>4,5</sup>

## How The Whole Food Matrix Supports Health



Supports balanced immune modulation for healthy inflammatory response



Supports microbial diversity and function to maintain a healthy microbiome



Improves nutrient bioavailability and absorption



Supports effective metabolic function through delivery of nutrient cofactors



Influences individual epigenetic expression



Understanding the phytonutrient profiles of whole foods, their biological benefits, and dietary value can help maximize health. With chronic conditions on the rise, recognizing the potency and nutritional composition of specific plants can help patients and providers incorporate foods that help minimize the development and progression of chronic disease.

**This booklet uses nutrient analysis and clinical insights to educate about the profiles of sixteen top crops to showcase the elements inherent in the Whole Food Matrix.**

### LEADING EDGE NUTRITION SCIENCE AND FARMING TECHNIQUES

Our sponsor, Standard Process, has a team of PhD Scientists who assay crops grown on their 850+ acre organic and regenerative farm. Standard Process breeds plants not for yield like many other farms, but for optimal nutritional content.



Learn more about the Standard Process Nutrition Innovation Center.

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## Phytonutrients And Color

### What are Phytonutrients?

Phytonutrients are natural, plant-derived compounds that support life and offer protection in plants. These bioactive compounds also confer health-supporting properties when included in a whole-foods-based diet. For example, a 2014 meta-analysis found that the more vegetables eaten, the lower the risk of all-cause mortality.<sup>6</sup>

### How Do Phytonutrients Support Health?

The body utilizes phytonutrients in a different way than it uses nutrients like protein, vitamins, and minerals. Many phytonutrients function as powerful antioxidants to offset oxidative stress and mitigate inflammation, while others support immunity by improving the immune response and exerting their own innate antimicrobial properties. Phytonutrients also support cardiovascular health by improving vascular function, lowering the risk of heart disease, and enhancing cognitive and hormonal function.<sup>7</sup> No single phytonutrient possesses all these properties. A diverse phytonutrient intake through a whole-foods diet rich in fruits and vegetables is one of the best ways to experience the health benefits of these incredible compounds.

### Why Is Phytonutrient Density Important?

Phytonutrients are natural, plant-derived compounds that support life and offer protection – innately in plants but for plant-eating humans as well.

Phytonutrients influence health profiles by:

- Reducing oxidative stress
- Supporting metabolic systems
- Regulating inflammatory responses
- Regulating specific gene transcription
- Influencing epigenetic expression

### Health Benefits Of Phenols

Phenolics are a group of phytonutrients that include phenolic acids, stilbenes, flavonoids, and condensed tannins. Phenolics are universally present in plant-derived foods and have been long-linked to the health properties of a plant-based diet. In addition to being major contributors to the vibrant red, blue, purple, and even yellow/orange colors in many fruits and vegetables, plant phenolics are powerful antioxidants, inflammation modulators, and beneficial to a healthy microbiome. When included in a whole-foods based diet these foods may help reduce the risk of developing chronic disease, including diabetes and cardiovascular disease.<sup>8</sup>

# Key Phytonutrient Color Wheel

**TISSUE AFFINITIES**  
heart, vasculature, tissue integrity, inflammation management, CNS, and cognition

**CLINICAL INDICATIONS**  
age-related cardiovascular and cognitive disorders, metabolic diseases, inflammatory disorders,

**TISSUE AFFINITIES**  
immune system, cardiovascular system, nervous system

**CLINICAL INDICATIONS**  
immune challenges, poor resistance to infection, cardiovascular disease, neurodegenerative disease, stress response

**TISSUE AFFINITIES**  
CNS/cognition, cellular defense, musculoskeletal system, vasculature, heart, collagen

**CLINICAL INDICATIONS**  
cognitive impairment, neurodegeneration, seasonal immune challenges, metabolic diseases, cardiovascular disease, aging, dermatological disorders



**TISSUE AFFINITIES**  
eyes, immune system, skin/connective tissue, liver, digestive system

**CLINICAL INDICATIONS**  
age-related eye health, dysbiosis, GI mucosal integrity, degenerative disorders, immune dysfunction



Learn more about the Color of Food at [wholisticmatters.com](http://wholisticmatters.com).

**TISSUE AFFINITIES**  
liver, gut, immune system, skeletal tissue/connective tissue

**CLINICAL INDICATIONS**  
endocrine dysfunction, detoxification, bone mineral density, normal cell growth, cardiovascular risk factors

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

## WHY IS NUTRIENT DENSITY IMPORTANT?

A diet lacking proper nutrients – replaced with processed food typical of the Standard American Diet – is one that is prone to chronic health problems. Most Americans fall significantly short of the necessary fruit and vegetable consumption needed to support adequate or ideal micronutrient intake.

According to the World Health Organization (WHO), everyone 10 years and older should aim for at least 400 grams of fruits and vegetables per day; for children 2–5 years at least 250 grams, and children 6–9 years at least 350 grams. Weighing foods, rather than measuring by volume, provides greater serving size accuracy.

### Nutrient GAP

- Potatoes account for more than 25% of all vegetable consumption
- Almost 100% do not eat enough whole grains
- Globally, more than two billion people are suffering from micronutrient insufficiency, especially iodine, iron, folate, vitamin A, and zinc <sup>9</sup>

### Phytonutrient GAP

- Only 12% of people consume the median intake of blue/purple fruit and vegetables
- Less than 30% of Americans consume the recommended intake of green fruits and vegetables <sup>10,11</sup>
- Less than 10% eat enough orange and red vegetables <sup>12,13</sup>

## SUPPLEMENTATION TO FILL NUTRIENT AND PHYTONUTRIENT GAPS

Even individuals who focus on eating whole, nutrient-dense foods may be at risk for specific nutrient inadequacies, which over time can lead to health challenges. Certain diseases, medications, environmental exposures, microbiome imbalances, and stress can impact how effectively the body digests and absorbs nutrients from food, which in turn affects overall nutritional status.

Soil health degradation also affects the nutrient composition of food, so eating a plant-rich diet may not supply adequate amounts of key nutrients. Since the 1940s, crop yield has been continuously increasing as a result of intensive farming techniques, artificial fertilization, pesticide application, and irrigation techniques, resulting in high-yielding varieties, but at the detriment of plant nutritional density.<sup>14</sup>

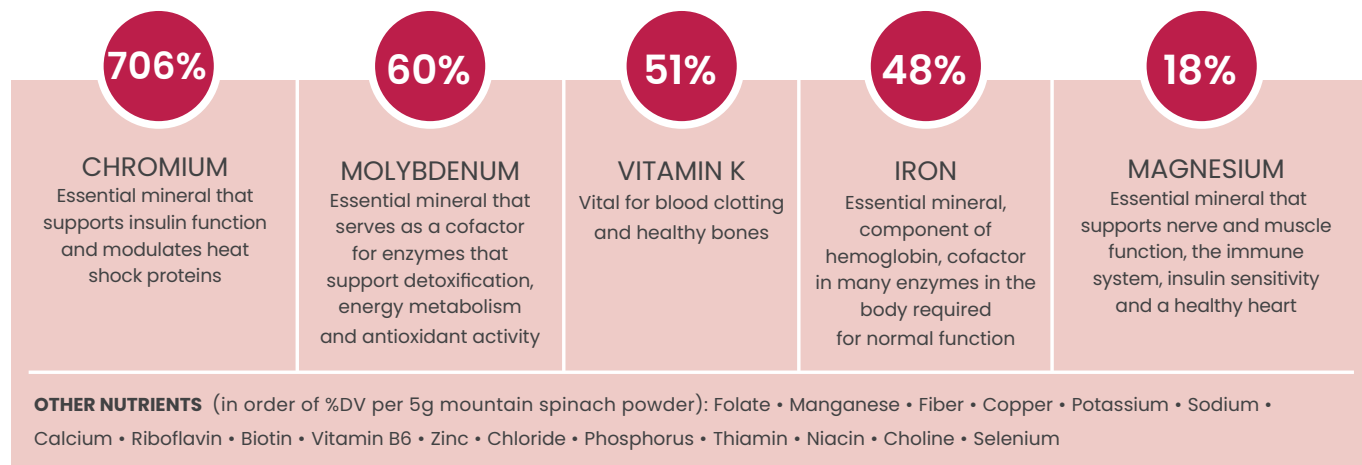
**Because of these agricultural practices, select fruits and vegetables are estimated to have lost their nutritional density by up to 25–50% over the past 50–70 years.**<sup>15</sup> The increasing decline of nutrient density in food crops signals a turning point in global nutrition, where diet alone may not be sufficient to meet the nutrient needs of the general population, and supplementation becomes necessary to fill nutrient and phytonutrient gaps.

**Ultimately, supplementation to bridge common nutrient gaps even in the healthiest diets may be necessary for ensuring the optimal intake of key nutrients for health and longevity.** Nutritional supplements formulated with whole, nutrient-dense foods can provide targeted vitamins, minerals, and phytonutrients within the matrix of foods where those compounds would be found naturally, allowing for improved bioavailability and therapeutic effects.



# MOUNTAIN SPINACH

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g mountain spinach powder



## KEY PHYTONUTRIENTS

### Betalains

Red and magenta betalain pigments demonstrating anti-inflammatory and cardioprotective effects

Betacyanins (amaranthins)

### Anthocyanidins

Purple and red pigments concentrated in mountain spinach with strong antioxidant and anti-inflammatory activity

Cyanadin-3-Glucoside (110 mcg/g)\*\*

### Carotenoids

Antioxidants with anti-cancer potential; may lower risk of macular degeneration

Lutein (138 mcg/g)\*\*

Beta-carotene (26.4 mcg/g)\*\*

Zeaxanthin (6.53 mcg/g)\*\*

### Flavonols

Promote antioxidant activity and vascular health

Rutin (320 mcg/g)\*\*

### Nitrate

Supports exercise performance and cardiovascular health

33,900 mcg/g\*\*

### Total Phenolic Content

Phenolic compounds, including flavonoids and phenolic acids, work synergistically with the vitamins and minerals in mountain spinach to support insulin sensitivity, antioxidant effects and cardiovascular health.

Total Phenolics 13mg/g\*\*

Mountain Spinach (*Atriplex hortensis*) is the vibrant, red-hued cousin of the more common green spinach. Mineral-dense and electrolyte-rich, mountain spinach is an excellent source of numerous nutrients, particularly chromium. It is valued in traditional medicine as a spring tonic, gently stimulating the metabolism and nourishing the nervous system.

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



BLOOD SUGAR BALANCE



CARDIOVASCULAR



PHYSICAL ENDURANCE

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](https://www.wholisticmatters.com/color-of-food).

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# COLLARD GREENS



Collard Greens (*Brassica oleracea var. viridis*), once a common dietary staple, are nutrient-dense powerhouses, full of vitamins, minerals, antioxidants, and fiber that support digestion, immunity and metabolic health. Collard greens are a particularly rich source of dietary folate, a key nutrient for nervous system and reproductive health.

## KEY NUTRIENTS

Percentages shown as %DV per serving of 5g collard green powder

73%

### VITAMIN K

Vital for blood clotting and healthy bones

12%

### FOLATE

Essential vitamin used in synthesis of DNA and RNA, prevention of neural tube defects, and lowering of homocysteine levels to reduce cardiovascular risk

9%

### IRON

Essential mineral, component of hemoglobin, cofactor in many enzymes in the body required for normal function

8%

### ZINC

Essential mineral that supports enzyme function, immune health, protein and DNA synthesis, and cell division

7%

### CALCIUM

Key structure of bones, muscle function, vascular contraction, nerve transmission, cellular signaling, and hormone secretion

**OTHER NUTRIENTS** (in order of %DV per 5g collard green powder): Fiber • Manganese • Magnesium • Selenium • Riboflavin • Phosphorus • Vitamin B6

## KEY PHYTONUTRIENTS

### Carotenoids

Antioxidants with anti-cancer potential; may lower risk of macular degeneration

Lutein (29.9 mcg/g)\*\*

Zeaxanthin (3.36 mcg/g)\*\*

Beta-carotene (2.43 mcg/g)\*\*

### Chlorophyll

Green pigment in plants with anti-inflammatory, antioxidant, and anti-bacterial activity

Chlorophyll (1010 mcg/g)\*\*

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Glucosinolates

Sulfur-containing secondary metabolites found in cruciferous vegetables, associated with antioxidant activity such as cardio-protection and liver detoxification support effects.

### Total Phenolic Content

The unique blend of phenolic compounds work synergistically with the vitamins and minerals in collard greens to lower cardiovascular risk, support detoxification pathways and improve nervous system function.

**Total Phenolics** 13.5mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



NERVOUS SYSTEM



CARDIOVASCULAR



REPRODUCTIVE HEALTH

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](https://www.wholisticmatters.com/color-of-food).

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# ROYAL ANCIENT OATS™



Royal Ancient Oats™ (*Avena strigosa*) are a unique strain of oats exclusive to Standard Process. Derived from wild ancestral variants, ancient oats are rich in naturally occurring phytonutrients, fiber, and essential minerals. Wild oats demonstrate a higher protein content than their domestic counterparts, and may contribute greater beta-glucan content to support cardiovascular, digestive, and metabolic health.

## KEY NUTRIENTS

Percentages shown as %DV per 30g Royal Ancient Oat™ Flour powder

<div style="background-color: #d4b85d; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="color: white; font-weight: bold; font-size: 1.2em;">134%</span> </div> <p style="text-align: center; font-weight: bold; margin: 5px 0;">MOLYBDENUM</p> <p style="text-align: center; font-size: 0.8em;">Essential mineral that serves as a cofactor for enzymes that support detoxification, energy metabolism and antioxidant activity</p>	<div style="background-color: #d4b85d; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="color: white; font-weight: bold; font-size: 1.2em;">32%</span> </div> <p style="text-align: center; font-weight: bold; margin: 5px 0;">BIOTIN</p> <p style="text-align: center; font-size: 0.8em;">B vitamin necessary for energy metabolism, histone modification, gene regulation, and cell signaling</p>	<div style="background-color: #d4b85d; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="color: white; font-weight: bold; font-size: 1.2em;">31%</span> </div> <p style="text-align: center; font-weight: bold; margin: 5px 0;">FIBER</p> <p style="text-align: center; font-size: 0.8em;">Promotes healthy cholesterol levels, promotes cardiovascular health, supports healthy bowel and microbiome function</p>	<div style="background-color: #d4b85d; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="color: white; font-weight: bold; font-size: 1.2em;">30%</span> </div> <p style="text-align: center; font-weight: bold; margin: 5px 0;">MANGANESE</p> <p style="text-align: center; font-size: 0.8em;">Mineral incorporated in enzymes that metabolize macronutrients; helps protect mitochondria from oxidation and supports formation of collagen and cartilage</p>	<div style="background-color: #d4b85d; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="color: white; font-weight: bold; font-size: 1.2em;">27%</span> </div> <p style="text-align: center; font-weight: bold; margin: 5px 0;">COPPER</p> <p style="text-align: center; font-size: 0.8em;">Mineral required for proper usage of iron in the body, neurotransmissions, and maturation of connective tissues</p>
<p><b>OTHER NUTRIENTS</b> (in order of %DV per 30g Royal Ancient Oat™ Flour powder): Chromium • Iron • Zinc • Magnesium • Phosphorus • Selenium • Choline • Vitamin E</p>				

## KEY PHYTONUTRIENTS

### Avenanthramides

Phenolic acids exclusive to oats with strong antioxidant and anti-inflammatory activities, particularly in the cardiovascular and bitter effect

- Royal Ancient Oats™ contain from 861% - 1500% **more avenanthramides** than conventional oats

Avenanthramide A B, and C (158.3 mcg/g)\*\*

### Beta-glucan

Supports cardiovascular health, healthy bowel function, metabolic health, healthy cholesterol levels, and increases satiety.

Beta-glucan (42,000 mcg/g)\*\*

### Total Phenolic Content

The unique complex of phenolic compounds found in Royal Ancient Oats™, including avenanthramides, contribute to the profound cardiovascular, immune, digestive and metabolic health benefits associated with this specific oat strain.

**Total Phenolics 2mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



HEALTHY CHOLESTEROL



DIGESTION



BLOOD SUGAR BALANCE



CARDIOVASCULAR

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

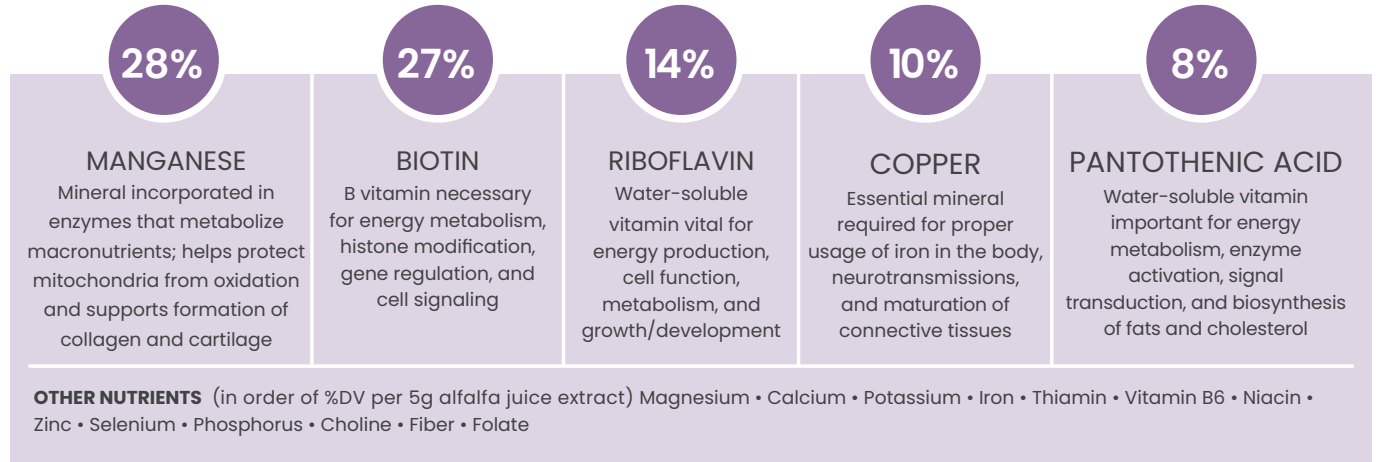
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# ALFALFA



The alfalfa plant (*Medicago sativa Linn.*) is grown for its unique blend of protein, B vitamins, and minerals. It is a perennial flowering legume widely grown across the world. The sprouts and whole plant material can be used to deliver essential nutrients and phytoactive compounds.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g alfalfa juice extract



## KEY PHYTONUTRIENTS

### Flavones

Compounds with anti-inflammatory, antimicrobial, and anti-cancer activity

### Flavonols

Promote antioxidant activity and vascular health

Quercetin (17 mcg/g)\*

### Chlorophyll

Green pigment in plants with anti-inflammatory, antioxidant, and anti-bacterial activity

### Saponins

Support the immune system, healthy cholesterol levels, and blood glucose levels

### Carotenoids

Antioxidants with anti-cancer potential; may lower risk of macular degeneration

### Total Phenolic Content

Alfalfa's rich phenolic composition contributes to the plant's antioxidant properties which helps to counteract oxidative damage in the body. These effects are associated with its therapeutic potential, including anti-inflammatory activity and support for cardiovascular and overall health.

**Total Phenolics** 13.5mg/g\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



BLOOD SUGAR BALANCE



CARDIOVASCULAR

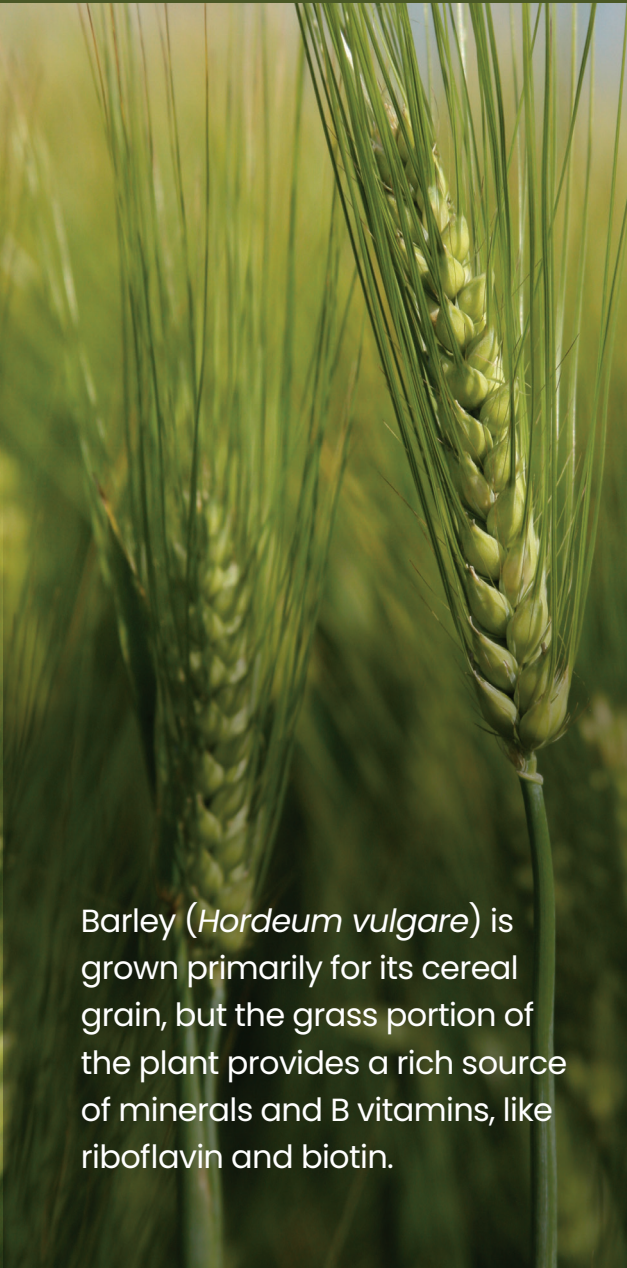


IMMUNE FUNCTION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

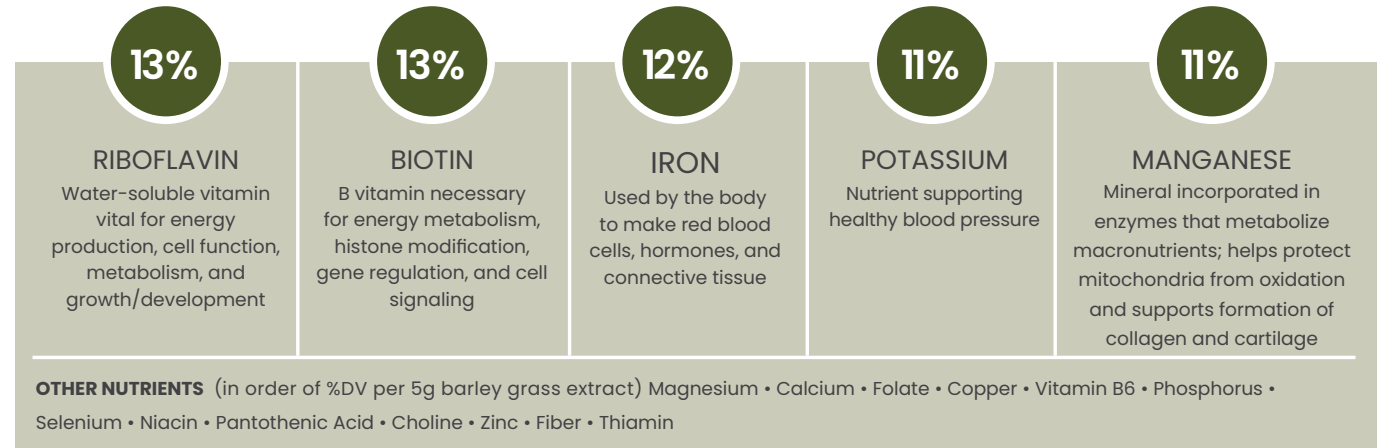
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# BARLEY GRASS



Barley (*Hordeum vulgare*) is grown primarily for its cereal grain, but the grass portion of the plant provides a rich source of minerals and B vitamins, like riboflavin and biotin.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g barley grass extract



## KEY PHYTONUTRIENTS

### Flavonoids

Compounds with anti-inflammatory, antimicrobial, and anti-cancer activity

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Fiber

Supports cardiovascular health, healthy bowel function, and healthy cholesterol levels  
Arabinoxylan

### Phenolic Acids

Compounds that promote anti-oxidant activity and vascular health, supporting the traditional use of barley grass as a venous tonic

### Total Phenolic Content

The high phenolic content of barley grass contributes to its powerful antioxidant capacity and ability to reduce oxidative stress, as well as its anti-inflammatory, cardioprotective, and potential anticancer benefits.

**Total Phenolics** 13.5mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



DIGESTION



LIVER / DETOXIFICATION



CARDIOVASCULAR

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

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# BEETROOT



Red table beets (*Beta vulgaris L. var. rubra*) are the deep red root vegetable loaded with unique phytoactive compounds, vitamins and minerals that are responsible for the root's renowned cardiovascular benefits.

## KEY NUTRIENTS Percentages shown as %DV per dry serving of 17g beetroot powder (approx. 5 whole beets)

<b>17%</b>	<b>13%</b>	<b>13%</b>	<b>13%</b>	<b>11%</b>
<b>FOLATE</b> An essential vitamin used in synthesis of DNA and RNA, amino acid metabolism, and prevention of neural tube defects	<b>COPPER</b> Essential mineral required for proper usage of iron in the body, neurotransmissions, and maturation of connective tissues	<b>MANGANESE</b> Mineral incorporated in enzymes that metabolize macronutrients; helps protect mitochondria from oxidation and supports formation of collagen and cartilage	<b>FIBER</b> Promote healthy cholesterol levels, promote cardiovascular health, support healthy bowel function	<b>IRON</b> Essential mineral that is a component of hemoglobin required to aid the transport of oxygen through the body and is a cofactor in many enzymes in the body required
<b>OTHER NUTRIENTS</b> (in order of %DV per dry serving of 17g beetroot powder) Magnesium • Potassium • Pantothenic Acid • Riboflavin • Calcium • Zinc • Phosphorus • Selenium • Thiamin • Niacin • Vitamin B6 • Choline				

## KEY PHYTONUTRIENTS

### Nitrate

Supports exercise performance and cardiovascular health

### Betalains

Red pigments demonstrating anti-inflammatory and cardio-protective effects

### Flavonols

Promote antioxidant activity and vascular health

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Flavones

Compounds with anti-inflammatory, antimicrobial, and anti-cancer activity

### Total Phenolic Content

Rich in phenolic acids and betalains, beets support liver detoxification and bile flow while providing antioxidant protection that benefits cardiovascular circulatory and digestive health.

**Total Phenolics 7.2mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



DIGESTION



CARDIOVASCULAR



CIRCULATORY SYSTEM



LIVER / GALL BLADDER

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](https://www.wholisticmatters.com/color-of-food).

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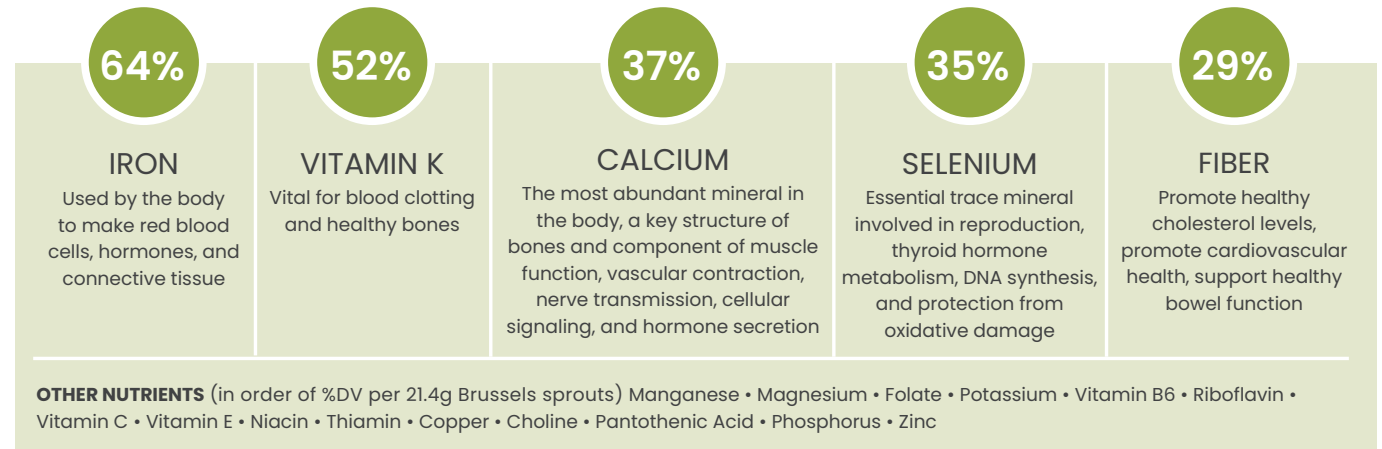
# BRUSSELS SPROUTS



Brussels sprouts (*Brassica oleracea L. var. gemmifera*) are a cruciferous vegetable associated with production of detoxification enzymes, antioxidant properties, cardiovascular protection, and anti-carcinogenic activity. Brussels sprouts are a staple vegetable in healthy diets, grown for their rich supply of glucosinolates and nutrients.

## KEY NUTRIENTS

Percentages shown as %DV per freeze dried serving of 21.4g Brussels (equal to 1 cup fresh chopped)



## KEY PHYTONUTRIENTS

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Glucosinolates

Sulfur-containing secondary metabolites found in cruciferous vegetables, associated with antioxidant activity such as cardio-protection and detoxification support.

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Flavonols

Promote antioxidant activity and vascular health

Kaempferol (9.5 mcg/g)\*  
Quercetin (3.0 mcg/g)\*

### Carotenoids

Yellow and green antioxidants with anti-cancer potential and may lower risk of macular degeneration

Lutein (11.8 mcg/g)\*\*  
Beta-carotene (30.2 mcg/g)\*\*

### Flavones

Compounds with anti-inflammatory, antimicrobial, and anti-cancer activity

### Total Phenolic Content

Contain flavonoids and phenolic compounds that enhance liver detox enzyme activity, support endocrine balance, and promote healthy digestion through antioxidant and anti-inflammatory effects.

**Total Phenolics** 7.6mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



CARDIOVASCULAR



LIVER / DETOXIFICATION



ENDOCRINE / HORMONE

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

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# BUCKWHEAT



The common buckwheat (*Fagopyrum esculentum*) plant is a pseudo-cereal grown for its unique ability to out-compete other plants for sun, soil, and water. It packs these nutrients into leaves, stems, flowers, and fruits. The fruits are a grain-like staple, and juice from the plant material contains essential nutrients and bioactive compounds.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g buckwheat juice extract

<b>33%</b>	<b>19%</b>	<b>13%</b>	<b>11%</b>	<b>7%</b>
<b>IRON</b> Essential mineral that is a component of hemoglobin required to aid the transport of oxygen through the body and is a cofactor in many enzymes in the body required for normal function	<b>MAGNESIUM</b> An essential mineral that supports nerve and muscle function, the immune system, and a healthy heart	<b>MANGANESE</b> Mineral incorporated in enzymes that metabolize macronutrients; helps protect mitochondria from oxidation and supports formation of collagen and cartilage	<b>VITAMIN K</b> Vital for blood clotting and healthy bones	<b>POTASSIUM</b> Nutrient supporting healthy blood pressure
<b>OTHER NUTRIENTS</b> (in order of %DV per 5g buckwheat juice extract) Biotin • Riboflavin • Copper • Pantothenic Acid • Niacin • Vitamin E • Selenium • Fiber • Calcium • Phosphorus • Zinc • Choline • Folate • Vitamin B6 • Thiamin				

## KEY PHYTONUTRIENTS

### Flavonols

Promote antioxidant activity and vascular health

Rutin (12,000 mcg/g)\*\*  
Quercetin (2,760 mcg/g)\*\*

### Anthocyanidins

Purple and red pigments concentrated in buckwheat stems with strong antioxidant and anti-inflammatory activity

### Carotenoids

Yellow antioxidants with anti-cancer potential and may lower risk of macular degeneration

Beta-carotene (52.26 mcg/g)\*\*  
Lutein (61.2 mcg/g)\*\*  
Zeaxanthin (6.0 mcg/g)\*\*

### Total Phenolic Content

Total phenolic content, including rutin and other flavonoids, supports cardiovascular and circulatory function, aids immune defense, and liver detoxification.

**Total Phenolics 49.8mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



IMMUNE FUNCTION



CARDIOVASCULAR



CIRCULATORY SYSTEM



LIVER / DETOXIFICATION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

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# KALE



Kale (*Brassica oleracea L. var. viridis*) is a cruciferous vegetable associated with production of detoxification enzymes, antioxidant properties, anti-microbial, and anti-carcinogenic activity. Kale is a staple vegetable in healthy diets that contain glucosinolates and a concentrated punch of essential nutrients.

## KEY NUTRIENTS Percentages shown as %DV per dry serving of 2.18g kale (equal to 1 cup raw chopped)

<b>47%</b> <b>IRON</b> Used by the body to make red blood cells, hormones, and connective tissue	<b>13%</b> <b>VITAMIN K</b> Vital for blood clotting and healthy bones	<b>10%</b> <b>MANGANESE</b> Mineral incorporated in enzymes that metabolize macronutrients; helps protect mitochondria from oxidation and supports formation of collagen and cartilage	<b>4%</b> <b>CALCIUM</b> The most abundant mineral in the body, a key structure of bones and component of muscle function, vascular contraction, nerve transmission, cellular signaling, and hormone secretion	<b>4%</b> <b>MAGNESIUM</b> Essential mineral that supports nerve and muscle function, the immune system, and a healthy heart
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**OTHER NUTRIENTS** (in order of %DV per dry serving of 2.18g kale) Selenium • Copper • Fiber • Folate • Niacin • Potassium • Riboflavin • Thiamin • Vitamin B6 • Phosphorus • Zinc • Choline • Pantothenic Acid • Vitamin E

## KEY PHYTONUTRIENTS

### Myrosinase

Enzyme found in plant tissue that initiates conversion of glucosinolates to bioactive isothiocyanates

### Glucosinolates

Sulfur-containing secondary metabolites found in cruciferous vegetables, associated with antioxidant activity such as cardio-protection and detoxification support.

### Flavonols

Promote antioxidant activity and vascular health  
 Kaempferol (267.4 mcg/g)\*  
 Quercetin (77.1 mcg/g)\*

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Carotenoids

Yellow and green antioxidants with anti-cancer potential and may lower risk of macular degeneration

Beta-carotene (4.626 mcg/g)\*\*  
 Lutein (38.4 mcg/g)\*\*

### Chlorophyll


Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Total Phenolic Content


Packed with polyphenols and flavonoids, the total phenolic content in kale supports liver function, helps regulate endocrine activity, and promotes digestion through antioxidant and anti-inflammatory pathways.

**Total Phenolics 8mg/g\*\***


### KEY SYSTEMS AND FUNCTIONS SUPPORTED



DIGESTION



LIVER / DETOXIFICATION

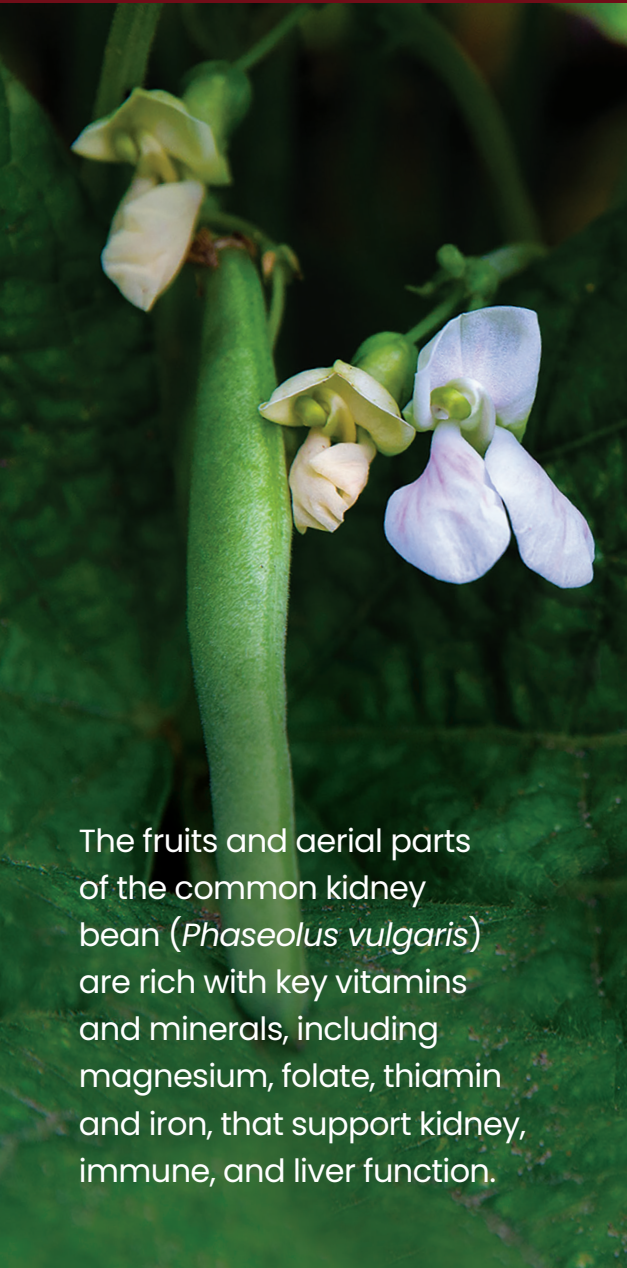


ENDOCRINE / HORMONE

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

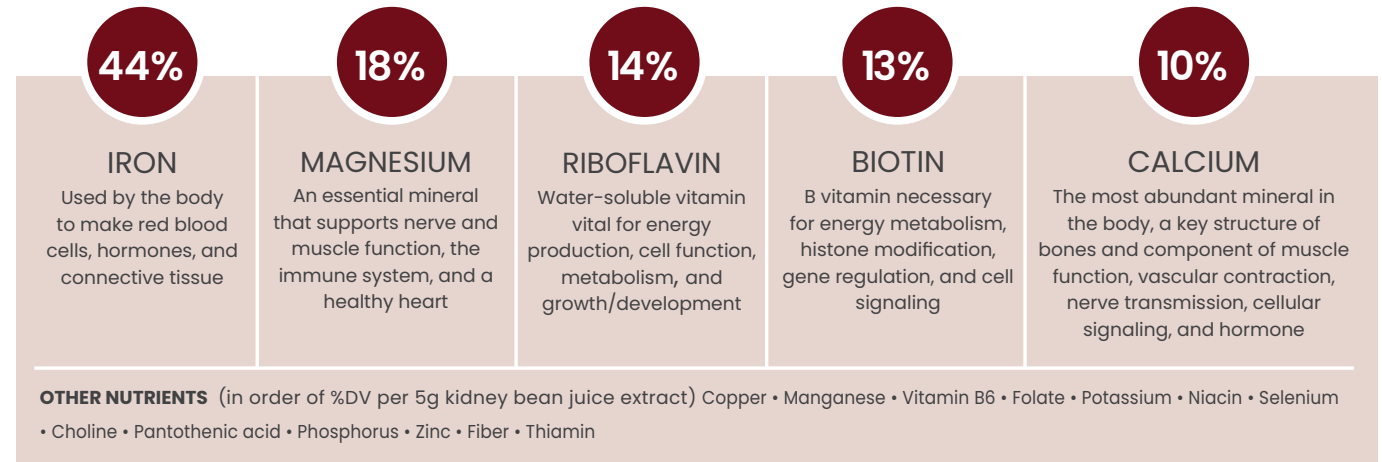
\* Data is mean values from Phenol-Explorer Database\* \*\* Data on file with WholisticMatters Values subject to change based on strain and experimental methods

# KIDNEY BEANS



The fruits and aerial parts of the common kidney bean (*Phaseolus vulgaris*) are rich with key vitamins and minerals, including magnesium, folate, thiamin and iron, that support kidney, immune, and liver function.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g kidney bean juice extract



## KEY PHYTONUTRIENTS

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Phenolic Acids

Compounds that promote antioxidant activity and vascular health

### Saponins

Support the immune system, healthy cholesterol levels, and blood glucose levels

### Flavonols

Promote antioxidant activity, vascular health, anti-cancer, antimicrobial, and anti-inflammatory

Kaempferol  
Quercetin  
Rutin

### Isoflavonoids

Phenolic compounds with direct antioxidant effects

### Total Phenolic Content

The total phenolic compounds, such as flavonoids and tannins, support kidney and liver function while enhancing immune response through antioxidant protection.

**Total Phenolics** 24.6mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



IMMUNE FUNCTION



KIDNEY FUNCTION



LIVER / DETOXIFICATION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](https://www.wholisticmatters.com/color-of-food).

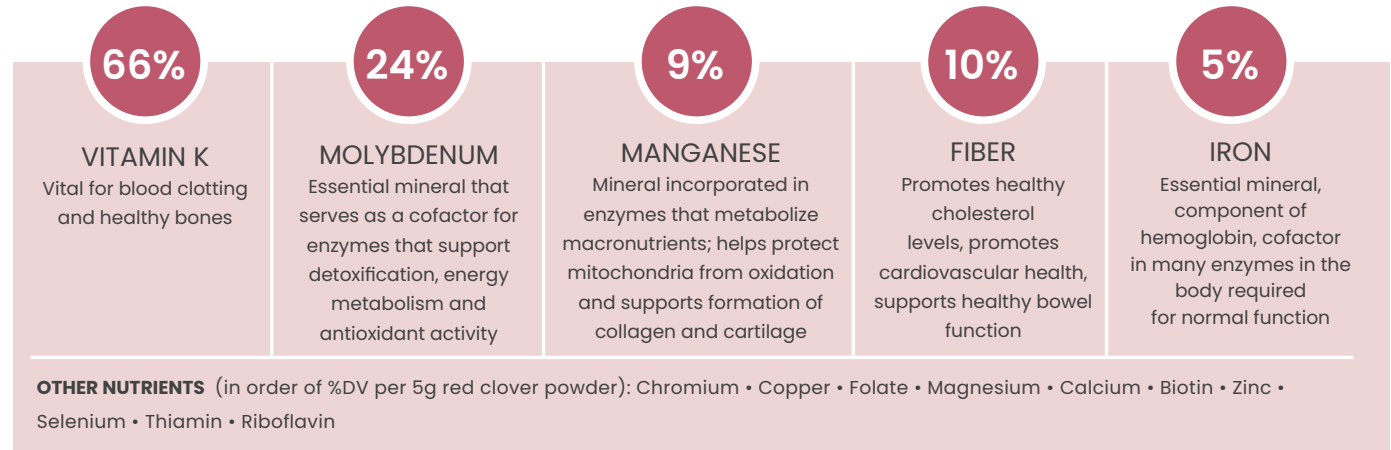
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# RED CLOVER



Red Clover (*Trifolium pratense*): used in traditional herbal medicine as an alterative and tonic, red clover is a deeply nourishing plant rich in vitamins and minerals. As a source of isoflavones that modulate estrogen, red clover is a popular remedy for supporting hormone balance and detoxification.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g red clover powder



## KEY PHYTONUTRIENTS

### Carotenoids

Antioxidants with anti-cancer potential; may lower risk of macular degeneration

Lutein (99.7 mcg/g)\*\*

Zeaxanthin (9.28 mcg/g)\*\*

Beta-carotene (22.1 mcg/g)\*\*

### Chlorophyll

Green pigment in plants with anti-inflammatory, antioxidant, and anti-bacterial activity

Chlorophyll (1150 mcg/g)\*\*

### Phytosterols

Compounds that help reduce the absorption of cholesterol in the gut

### Isoflavones

Phytoestrogens are phenolic compounds that can exert mild estrogen-like activity in the body. Isoflavones—such as those found in red clover—are a well-studied class of phytoestrogens associated with support for metabolic and neuroprotective health. Red clover isoflavones may also support bone density and help manage symptoms in peri- and postmenopausal women.

### Total Phenolic Content

The isoflavones and phenolic acids found in red clover are responsible for the phytoestrogenic and antioxidant benefits the plant is well known for.

**Total Phenolics** 15.2mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



BONE HEALTH



ENDOCRINE / HORMONE



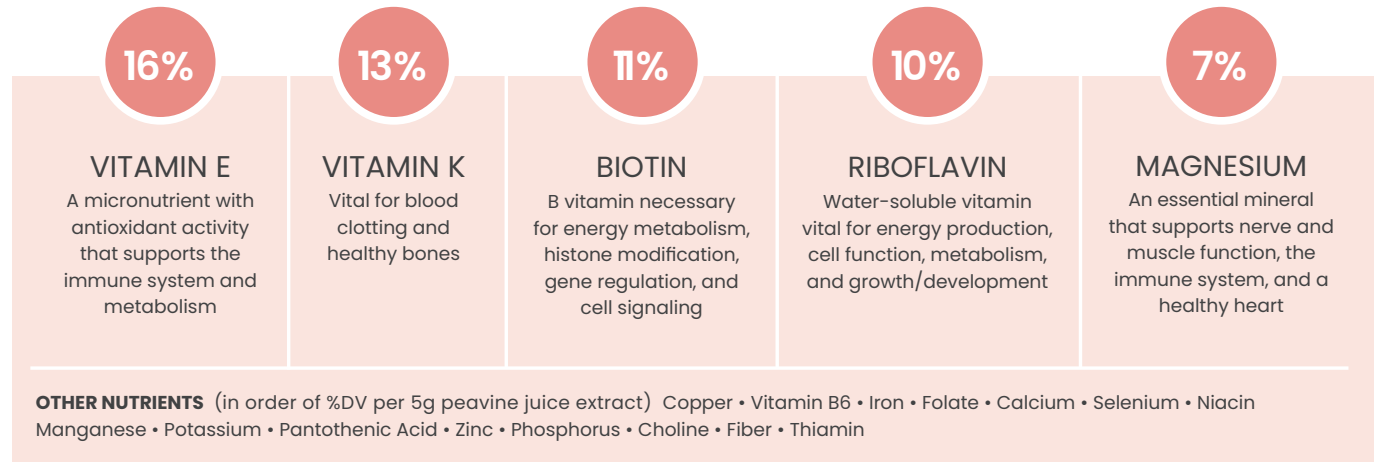
LIVER / DETOXIFICATION

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# PEAVINE

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g peavine juice extract



## KEY PHYTONUTRIENTS

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Flavonols

Promote antioxidant, anti-cancer, vascular, and anti-inflammatory activity  
Kaempferol  
Quercetin

### Saponins

Support the immune system, healthy cholesterol levels, and blood glucose levels

### Carotenoids

Antioxidants with anti-cancer potential and may lower risk of macular degeneration

Lutein (7.22 mcg/g)\*\*  
Zeaxanthin (0.39 mcg/g)\*\*

### Total Phenolic Content

Contains phenolic antioxidants that support endocrine balance, assist kidney function, and aid liver detoxification processes.

**Total Phenolics 33.9mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



ENDOCRINE / HORMONE



KIDNEY FUNCTION

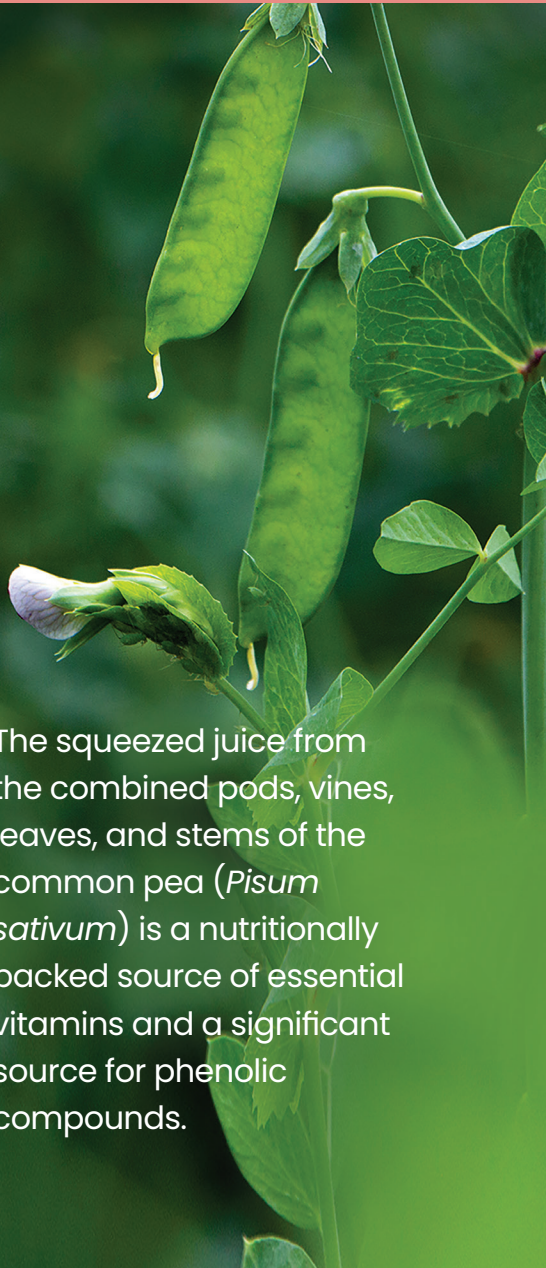


LIVER / DETOXIFICATION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

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The squeezed juice from the combined pods, vines, leaves, and stems of the common pea (*Pisum sativum*) is a nutritionally packed source of essential vitamins and a significant source for phenolic compounds.

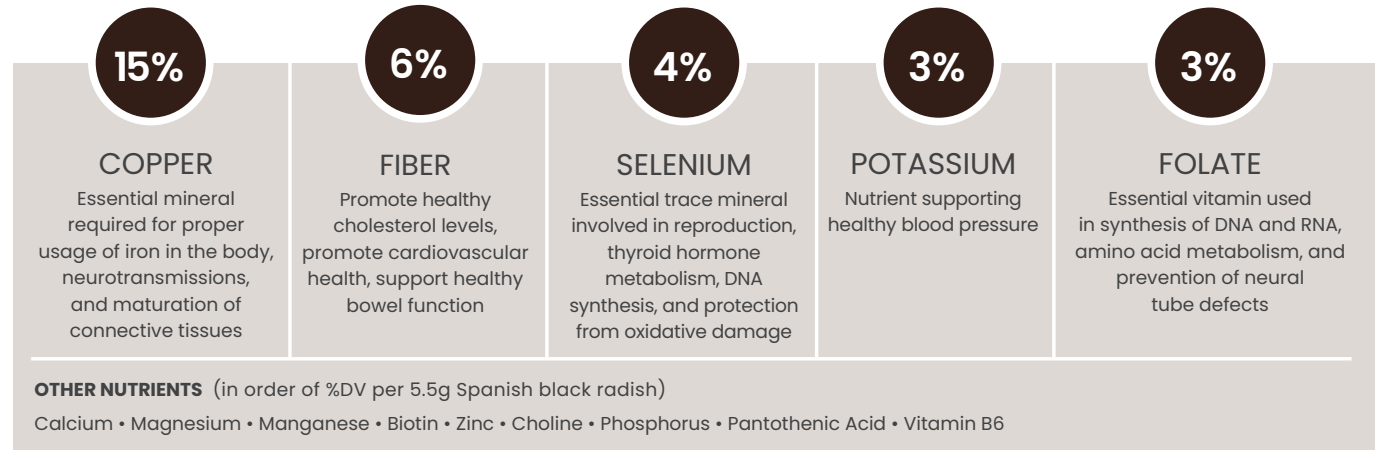


# SPANISH BLACK RADISH



Spanish Black Radish (*Raphanus sativus L. Var. niger*) is a cruciferous vegetable associated with the production of detoxification enzymes, healthy digestion, and healthy liver and gallbladder function. Spanish black radish is grown for its rich supply of glucosinolates.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5.5g Spanish black radish



## KEY PHYTONUTRIENTS

### Myrosinase

Enzyme found in plant tissue that initiates conversion of glucosinolates to bioactive isothiocyanates

### Saponins

Compounds that support the immune system, healthy cholesterol levels, and blood glucose levels

### Tannins

Large set of diverse phenolic compounds found in plants that contribute to antioxidant activity, antimicrobial action, and distinct dark color

### Glucosinolates

Sulfur-containing secondary metabolites found in cruciferous vegetables, associated with antioxidant activity such as cardio-protection and detoxification support effects.

Glucoraphasatin (powerful glucosinolate unique to radish)

### Total Phenolic Content

The total phenolic content, including glucosinolate-derived compounds, supports detoxification, improves digestion, and helps regulate cholesterol through antioxidant and liver enzyme-supportive actions.

**Total Phenolics** 12.6mg/g\*\*

### KEY SYSTEMS AND FUNCTIONS SUPPORTED



DIGESTION



LIVER / GALL BLADDER



HEALTHY CHOLESTEROL

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

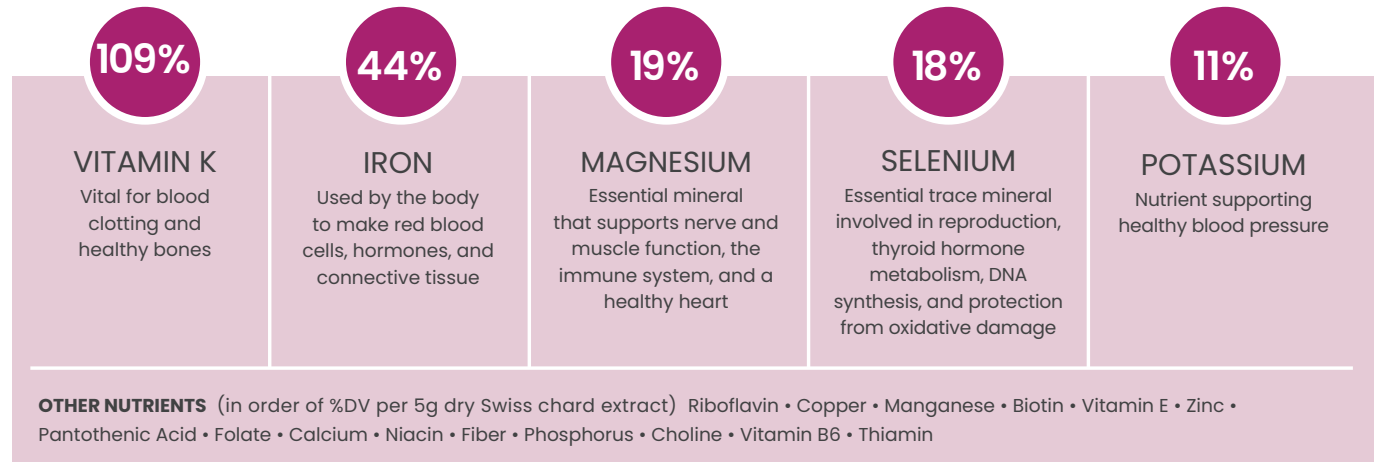
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# SWISS CHARD



Dark leafy greens with vibrantly colored stems and veins are trademark features of Swiss chard (*Beta vulgaris L. subsp. cicla*). This plant is a mineral delivery powerhouse.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g dry Swiss chard extract



## KEY PHYTONUTRIENTS

### Lignans

Polyphenolic compounds metabolized by gut bacteria that support antioxidant activity.

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Carotenoids

Yellow and green antioxidants with anti-cancer potential and may lower risk of macular degeneration

- Lutein (145 mcg/g)\*\*
- Zeaxanthin (10.6 mcg/g)\*\*
- Beta-carotene (52.26 mcg/g)\*\*

### Flavonols

Promote antioxidant activity and vascular health

- Kaempferol (92 mcg/g)\*
- Quercetin (75 mcg/g)\*

### Betalains

Red pigments with antioxidant, anti-cancer, anti-lipidemic, and antimicrobial properties

### Total Phenolic Content

Rich in phenolic compounds such as flavonoids and phenolic acids, which act as powerful antioxidants that modulate numerous physiological pathways, including reducing gut inflammation, protecting the nervous system from oxidative stress, and aiding liver detoxification by enhancing enzyme activity involved in neutralizing toxins.

**Total Phenolics 18.8mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



DIGESTION



NERVOUS SYSTEM

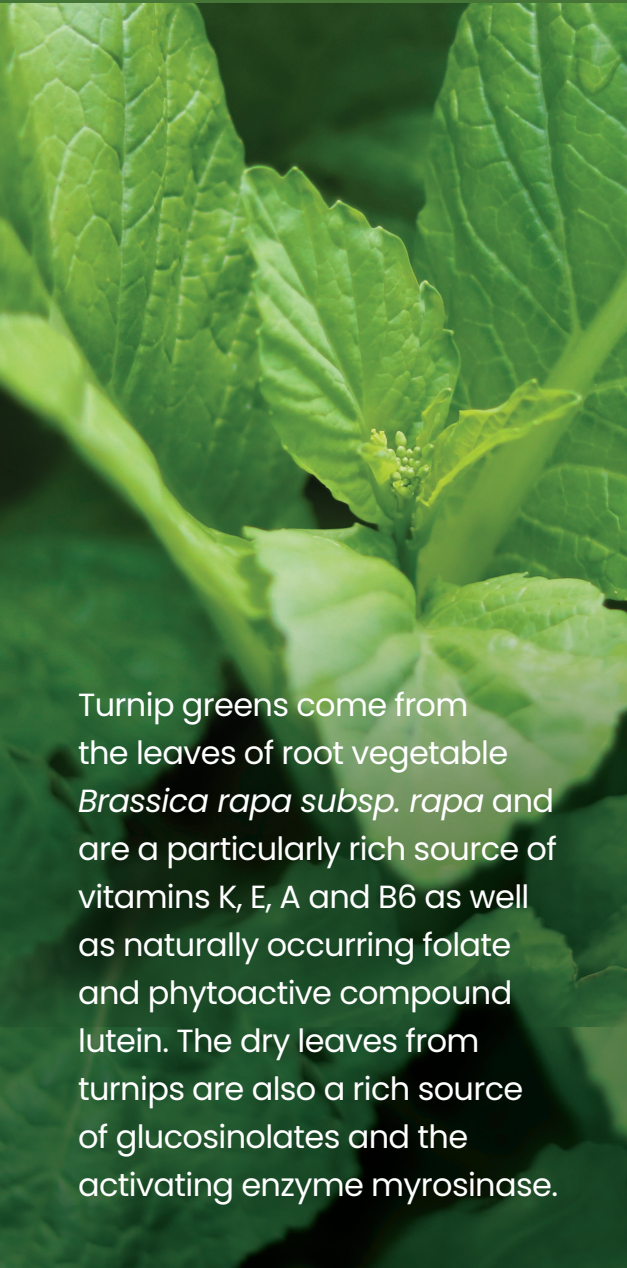


LIVER / DETOXIFICATION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

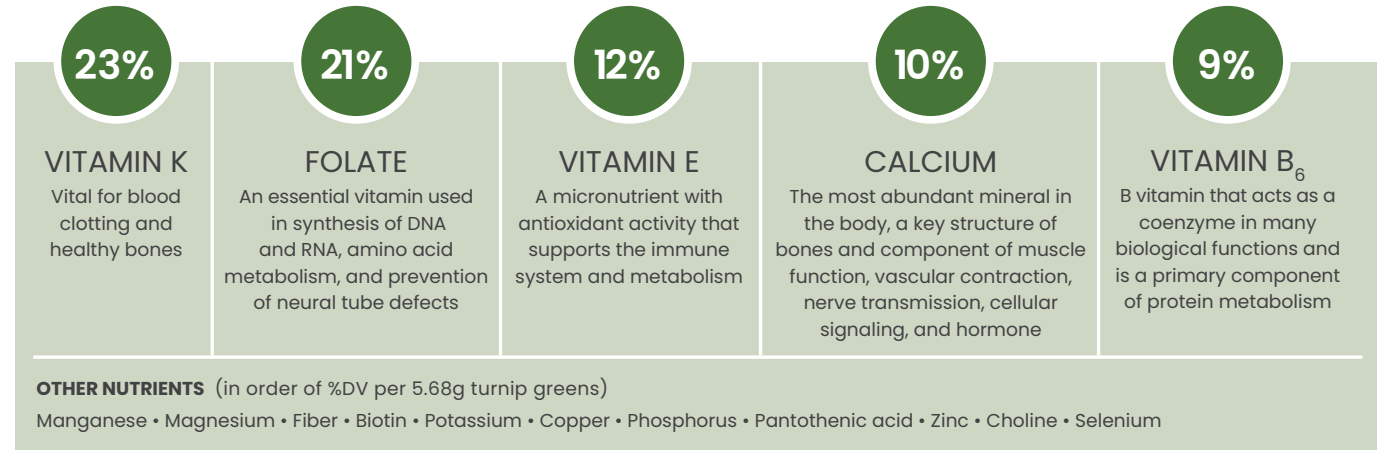
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# TURNIP GREENS



Turnip greens come from the leaves of root vegetable *Brassica rapa subsp. rapa* and are a particularly rich source of vitamins K, E, A and B6 as well as naturally occurring folate and phytoactive compound lutein. The dry leaves from turnips are also a rich source of glucosinolates and the activating enzyme myrosinase.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5.68g turnip greens



## KEY PHYTONUTRIENTS

### Chlorophyll

Green pigment in plants with potential anti-inflammatory, antioxidant, and anti-bacterial activity

### Myrosinase

Enzyme found in plant tissue that initiates conversion of glucosinolates to bioactive isothiocyanates

### Glucosinolates

Sulfur-containing secondary metabolites found in cruciferous vegetables, associated with antioxidant activity such as cardio-protection and detoxification support.

### Flavonols

Promote antioxidant activity and vascular health

Kaempferol (31.7 mcg/g)\*  
Quercetin (4.9 mcg/g)\*

### Carotenoids

Antioxidants with anti-cancer potential; may lower risk of macular degeneration

Beta-carotene (220.8 mcg/g)\*\*

Lutein (363mcg/g)\*\*

Zeaxanthin (30mcg/g)\*\*

### Total Phenolic Content

The phenolic compounds in turnip greens, including ellagic acid, support the B vitamin content in the vegetable to provide strong anti-inflammatory, cardiovascular and nervous system benefit.

**Total Phenolics** 16.9 mg/g\*\*

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



CARDIOVASCULAR



NERVOUS SYSTEM

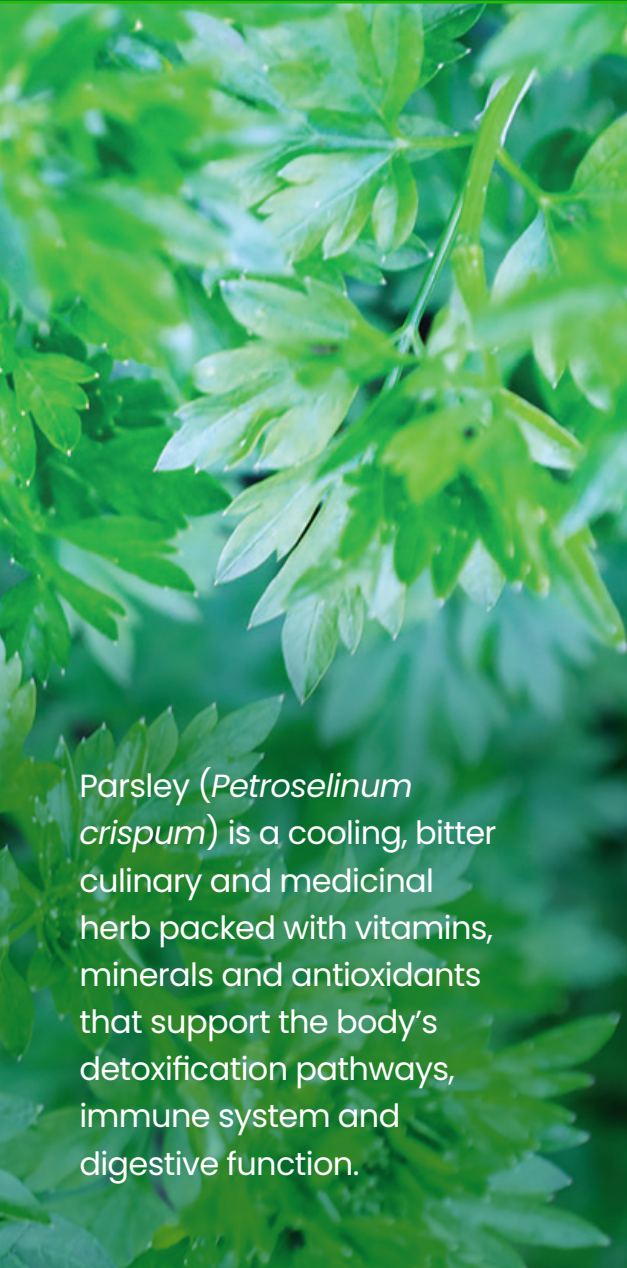


CIRCULATORY SYSTEM

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

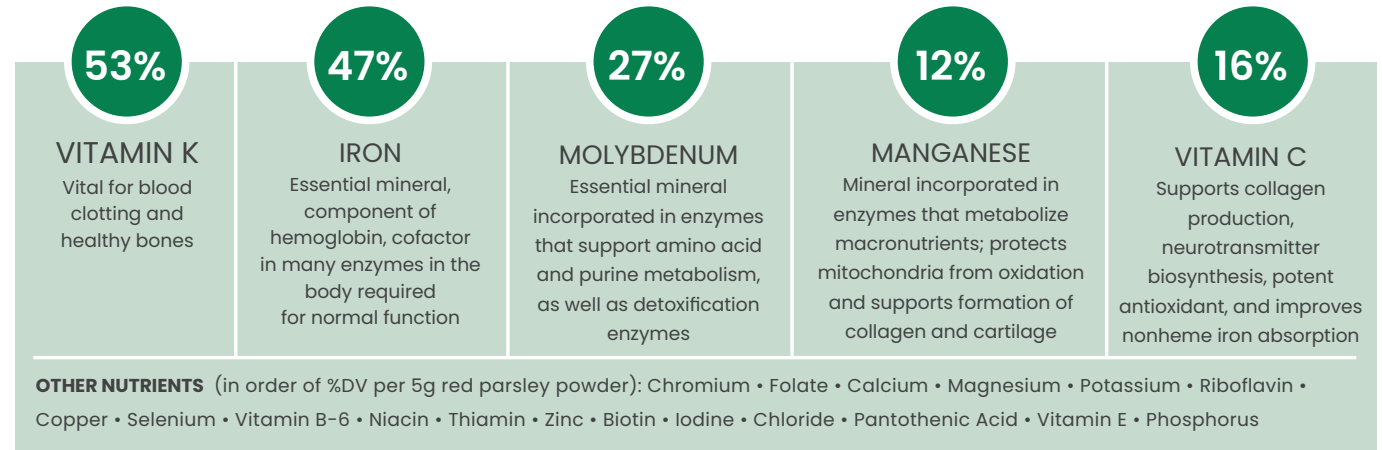
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# PARSLEY



Parsley (*Petroselinum crispum*) is a cooling, bitter culinary and medicinal herb packed with vitamins, minerals and antioxidants that support the body's detoxification pathways, immune system and digestive function.

## KEY NUTRIENTS Percentages shown as %DV per serving of 5g parsley powder



## KEY PHYTONUTRIENTS

### Carotenoids

Antioxidants with anti-cancer potential and may lower risk of macular degeneration

Lutein (84.4 mcg/g)\*\*

Zeaxanthin (18.5 mcg/g)\*\*

Beta-carotene (5.82 mcg/g)\*\*

### Chlorophyll

Green pigment in plants with anti-inflammatory, antioxidant, and anti-bacterial activity

Chlorophyll (1180 mcg/g)\*\*

### Flavones

Phytoactive compounds with anti-inflammatory, anti-microbial, and anti-cancer activity

Apigenin (307.4 mcg/g)\*

### Furanocoumarins

Phytoactive metabolites with potential antioxidative, anti-proliferative, anti-inflammatory, and bone health promoting effects

### Flavonols

Promote antioxidant activity and promote vascular health

Quercetin (6.5 mcg/g)\*

### Total Phenolic Content

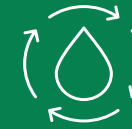
The total phenolic content, including flavonoids like apigenin, parsley promotes digestion, supports vascular health, and enhances detoxification through antioxidant and mild diuretic effects.

**Total Phenolics 14.4mg/g\*\***

## KEY SYSTEMS AND FUNCTIONS SUPPORTED



IMMUNE FUNCTION



CIRCULATORY SYSTEM



LIVER / DETOXIFICATION

REFERENCES AVAILABLE AT [WHOLISTICMATTERS.COM/COLOR-OF-FOOD](http://WHOLISTICMATTERS.COM/COLOR-OF-FOOD).

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