

# BUCKWHEAT



## 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, but juice from the plant material is a perfect source for essential nutrients and bioactive compounds.



## Phytoactives

### Flavonols

Phytoactive compounds that promote antioxidant activity and promote vascular health

**Rutin** (12 mg/g)\*\*

**Quercetin** (2.76 mg/g)\*\*

### Carotenoids

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

**Beta Carotene** (52.26 mcg/g)\*\*

### Anthocyanidins

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

**Cyanidin-3-galactoside** (11.1 mcg/g)\*\*

**Cyanidin-3-glucoside** (5.3 mcg/g)\*\*

**Cyanidin** (0.1 mcg/g)\*\*

### Chlorophyll

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

### Carotenoids

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

**Lutein** (61.2 mcg/g)\*\*

**Zeaxanthin** (6.0 mcg/g)\*\*

## What is the Whole Food Matrix?



Supports balance immune modulation for healthy inflammation response.

Supports the gut microflora and a healthy metabolic fingerprint of the gut.

Benefits of nutrients food matrix enhances bioavailability by up to 60%.

Organic and adaptive regenerative farming techniques delivers nutrient dense source of key phytonutrients and helps balance healthy lifestyles.

Increased intake of vegetables and fruits in whole food nutrition influences individual epigenetic expression of our health potential.



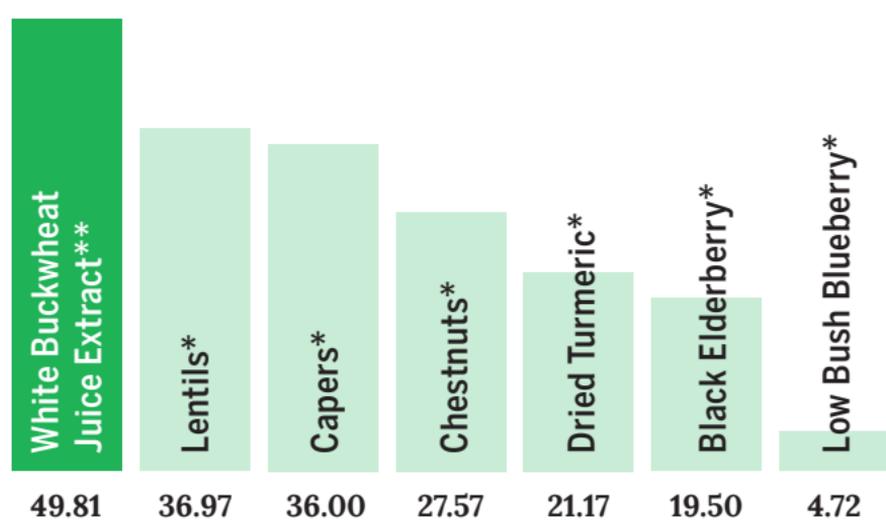
## Gallic Acid Equivalence

### What is GAE?

GAE, or “gallic acid equivalence,” indicates levels of important phytoactives available in the plant and extracts. GAE is derived by comparing to the gallic acid reference standard, a simple phenolic substance. Studies have shown that phytoactives in plants contribute to their beneficial effect on development of chronic diseases.

## Total Phenolic Concentration

Measured: Total Phenolics as Gallic Acid Equivalence (mg/g)



\* Data is mean values from Phenol-Explorer Database<sup>1</sup>

\*\* Data on file with WholisticMatters

Values subject to change based on strain and experimental methods

## Key Nutrients

Percentages shown as %DV per 5g of buckwheat juice extract

### Iron

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.

33%

### Magnesium

An essential mineral that supports nerve and muscle function, the immune system, and a healthy heart.

19%

### Manganese

Essential mineral incorporated in enzymes that metabolize macronutrients; helps protect mitochondria from oxidation and forms both collagen and cartilage.

13%

### Vitamin K

Vital for blood clotting and healthy bones.

11%

### Potassium

Nutrient supporting healthy blood pressure.

7%

## Other Nutrients

(in order of %DV per 5g buckwheat juice extract)

Biotin (Vitamin B7)

Riboflavin (Vitamin B2)

Copper

Pantothenic acid (Vitamin B5)

Niacin (Vitamin B3)

Vitamin E (Alpha-tocopherol)

Selenium

Fiber

Calcium

Phosphorus

Zinc

Choline

Folate (Vitamin B9)

Protein

Carbohydrate

Vitamin B6 (Pyridoxal

5'-phosphate)

Thiamin (Vitamin B1)

Lipids



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## References

1. Rothwell, J.A., et al., Phenol-Explorer 3.0: a major update of the Phenol-Explorer database to incorporate data on the effects of food processing on polyphenol content. Database, 2013. 2013: p. bat070-bat070.