

# KIDNEY BEANS



## Kidney Bean

The material of the common bean (*Phaseolus vulgaris*) is rich with fiber, protein, vitamin B1, folate, iron, and magnesium, among other macro- and micronutrients. The sprouts and full-grown plant contain ample amounts of essential minerals, various vitamins, and phenolic compounds. Eating kidney beans and other legumes improves your food quality score (FQS).



## Phytoactives

### Chlorophyll

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

### Flavanols<sup>1</sup>

Promote antioxidant, anticancer, antimicrobial, and anti-inflammatory activity

### Lignans

Large plant polyphenolic compounds that bypass human digestion, feed gut bacteria, and provide antioxidant activity

**Lariciresinol** (1.2 mcg/g)\*

**Pinoresinol** (0.3 mcg/g)\*

**Secoisolariciresinol** (.8 mcg/g)\*

**Syringaresinol** (0.08 mcg/g)\*

### Phenolic Acids

Phytoactive compounds that promote antioxidant activity and promote vascular health

**Ferulic Acid** (128.4 mcg/g)\*

**Feruloyl-malate<sup>2</sup>**

**p-Coumaric Acid** (38.1 mcg/g)\*

**Coumaroyl-malate<sup>2</sup>**

**Sinapic Acid** (51.7 mcg/g)\*

### Flavonols

Promote antioxidant activity and promote vascular health

**Quercetin** (6.8 mcg/g)\*

**Kaempferol-3-O-rutinoside<sup>2</sup>**

**Quercetin-3-glucuronide<sup>2</sup>**

**Kaempferol-3-glycoside<sup>2</sup>**

**Quercetin-3-glycoside<sup>2</sup>**

**Kaempferol** (12.2 mcg/g)\*

**Quercetin-3-acetyl-glycoside<sup>2</sup>**

**Kaempferol-3-O-acetyl-glucoside** (164 mcg/g)\*

**Kaempferol-3-O-glucoside** (398.8 mcg/g)\*

**Kaempferol-3-O-xylosyl-glucoside** (115 mcg/g)\*

**Rutin<sup>2</sup>**

### Isoflavanoids

Phenolic compounds with direct antioxidant effects

**Genistein** (2.0 mcg/g)\*

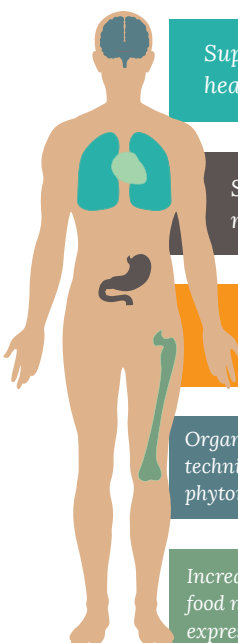
### Saponins

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

**Soyasaponin V<sup>2</sup>**

**Soyasaponin I<sup>2</sup>**

## 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.



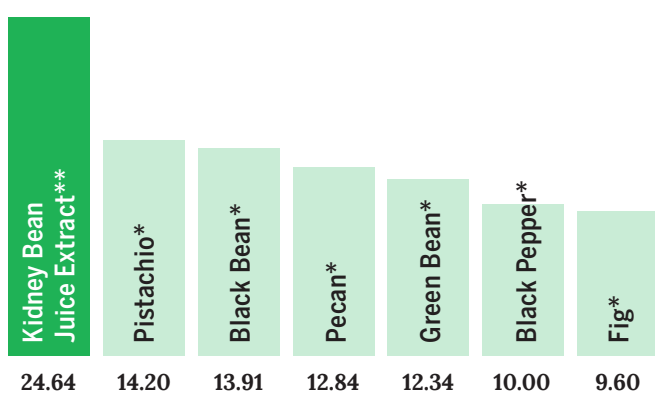
## Gallic Acid Equivalence

### 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 Wholistic Matters

Values subject to change based on strain and experimental methods

## Key Nutrients

Percentages shown as %DV per 5g of kidney bean juice extract

### Iron

Used by the body to make red blood cells, hormones, and connective tissue.

44%

### Magnesium

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

18%

### Riboflavin (Vitamin B2)

Water-soluble vitamin vital for energy production, cell function, metabolism, and growth/development.

14%

### Biotin (Vitamin B7)

B vitamin necessary for energy metabolism, histone modification, gene regulation, and cell signaling.

13%

### Calcium

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.

10%

## Other Nutrients

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

Copper	Pantothenic acid (Vitamin B5)
Manganese	Phosphorus
Vitamin B6 (Pyridoxyl-5'-phosphate)	Zinc
Folate	Fiber
Potassium	Carbohydrate
Niacin (Vitamin B3)	Lipids
Selenium	Thiamin (Vitamin B1)
Protein	
Choline	



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[WholisticMatters.com](http://WholisticMatters.com)

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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.
2. Ramabulana, T., Mavunda, R. D., Steenkamp, P. A., Piater, L. A., Dubery, I. A., & Madala, N. E. (2015). Secondary metabolite perturbations in Phaseolus vulgaris leaves due to gamma radiation. Plant Physiology and Biochemistry, 97, 287-295. doi:https://doi.org/10.1016/j.plaphy.2015.10.018