

KALE



Kale

Kale (*Brassica oleracea var. viridis L*) is a cruciferous vegetable associated with production of detoxification enzymes, antioxidant properties, cardiovascular protection, and anti-carcinogenic activity. Kale is a staple vegetable in healthy diets that contains glucosinolates and a concentrated punch of essential nutrients. Eating kale and other leafy green vegetables improves your food quality score (FQS).



Phytoactives

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 mostly found in cruciferous vegetables, when activated by myrosinase from the plant or after ingestion by gut bacteria, associated with positive effects stemming from antioxidant activity such as cardio-protection and detoxification support

- Gluconapin** (mg/g 0.22454) **
- Neoglucobrassicin** (mg/g 0.1153) **
- Glucoraphasatin** (mg/g 0.0718) **
- Glucoraphanin** (mg/g 0.06072) **
- Glucobrassicin** (mg/g 0.03981) **
- Glucobrassicinapin** (mg/g 0.02884) **
- 4-MeOH Glucobrassicin** (mg/g 0.02589) **
- Sinigrin** (mg/g 0.00356) **
- Glucoerucin** (mg/g 0.00298) **

Carotenoids

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

- Lutein** (38.4 mcg/g)**

Carotenoids

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

- Beta Carotene** (4.626 mcg/g)**

Flavonols

Promote antioxidant activity and promote vascular health

- Kaempferol** (267.4 mcg/g)*
- Quercetin** (77.1 mcg/g)*

Fiber

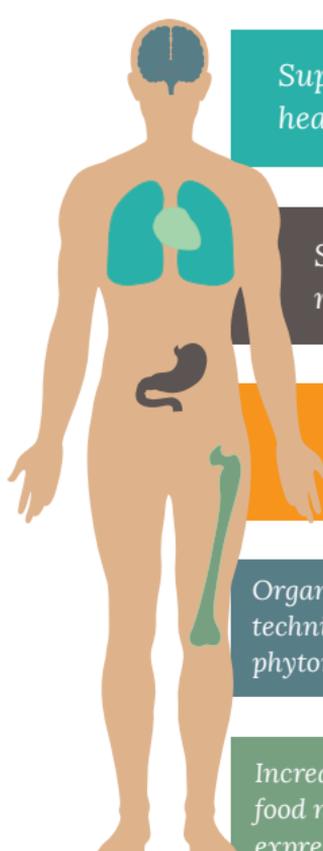
Promote healthy cholesterol levels, promote cardiovascular health, support healthy bowel function

Lignans

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

- Pinoresinol** (1.691 mcg/g)*
- Lariciresinol** (0.599 mcg/g)*
- Secoisolariciresinol** (0.019 mcg/g)*
- Matairesinol** (0.012 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.



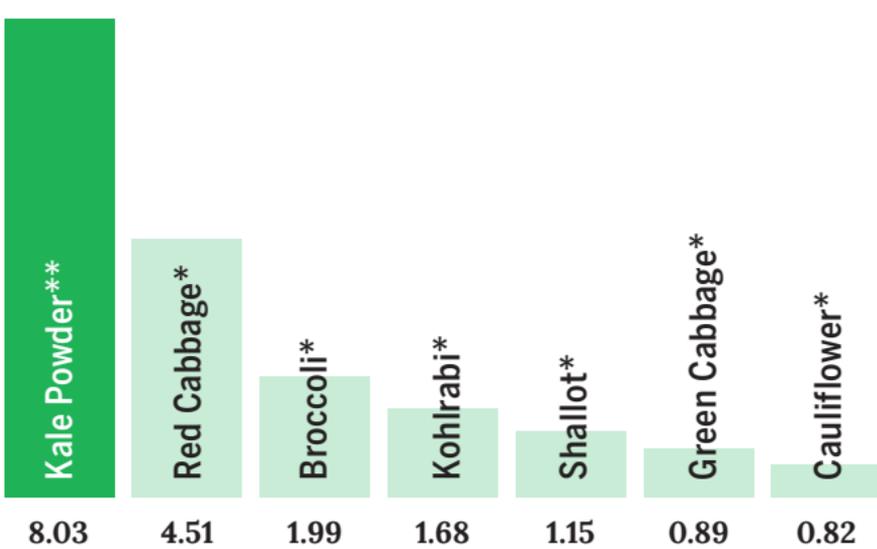
Gallic Acid Equivalence

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 Database¹

** Data on file with WholisticMatters

Values subject to change based on strain and experimental methods

Key Nutrients

Data shown as %DV per dry serving of kale (2.18g)

Iron

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

47%

Vitamin K

Vital for blood clotting and healthy bones.

13%

Manganese

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

10%

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.

4%

Magnesium

Involved in many different regulatory processes including muscle and nerve function, blood glucose regulation, blood pressure, and protein, bone, and DNA production.

4%

Other Nutrients

(in order of %DV per dry serving of kale (2.18g))

Selenium

Copper

Fiber

Folate (Vitamin B9)

Niacin (Vitamin B3)

Potassium

Riboflavin (Vitamin B2)

Thiamin (Vitamin B1)

Protein

Lipids

Vitamin B6 (Pyridoxal

5'-phosphate)

Phosphorus

Zinc

Choline

Pantothenic acid (Vitamin B5)

Carbohydrate

Vitamin E (Alpha-tocopherol)



WholisticMatters™

POWERED BY: STANDARD PROCESS INC.

We are dedicated to advancing the latest insights and information available in nutrition therapy and clinical nutrition and to presenting only the most balanced, credible, and reliable clinical nutrition and science available.

WholisticMatters.com

©2020 Standard Process Inc. All rights reserved. L00074 03/20

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.