



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.

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 (0.22454 mg/g)**

Glucoraphasatin (0.0718 mg/g)**

Glucobrassicin (0.03981 mg/g)**

4-MeOH Glucobrassicin (0.02589 mg/g)**

Glucoerucin (0.00298 mg/g)**

Neoglucobrassicin (0.1153 mg/g)**

Glucoraphanin (0.06072 mg/g)**

Glucobrassicinapin (0.02884 mg/g)**

Sinigrin (0.00356 mg/g)**

Carotenoids

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

Lutein (38.4 mcg/g)**

Carotenoids

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Beta-carotene (4.626 mcg/g)**

Flavonols

Promote antioxidant activity and vascular health

Kaempferol (267.4 mcg/g)*

Quercetin (77.1 mcg/g)*

Fiber

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

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 mg/g)*

What is the Whole Food Matrix?

Supports balanced immune modulation for healthy inflammation response

Supports gut microbes and a healthy metabolic fingerprint of the gut

Enhances nutrient bioavailability up to 60%

Includes organic and adaptive regenerative farming techniques that deliver a nutrient-dense source of key phytonutrients and help balance healthy lifestyles

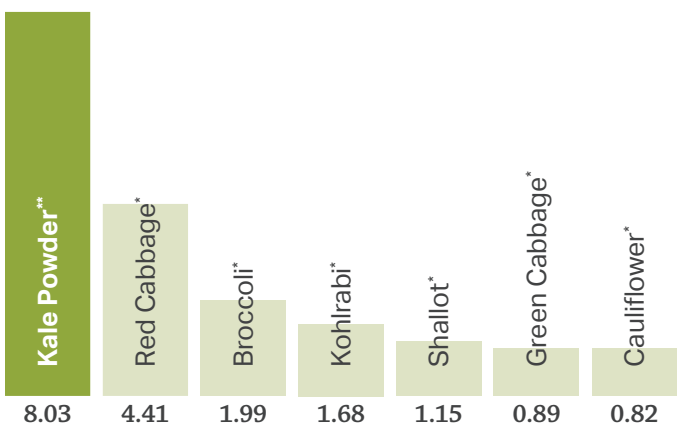
Increases intake of vegetables and fruits in whole food nutrition to influence individual epigenetic expression

Gallic Acid Equivalence

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)

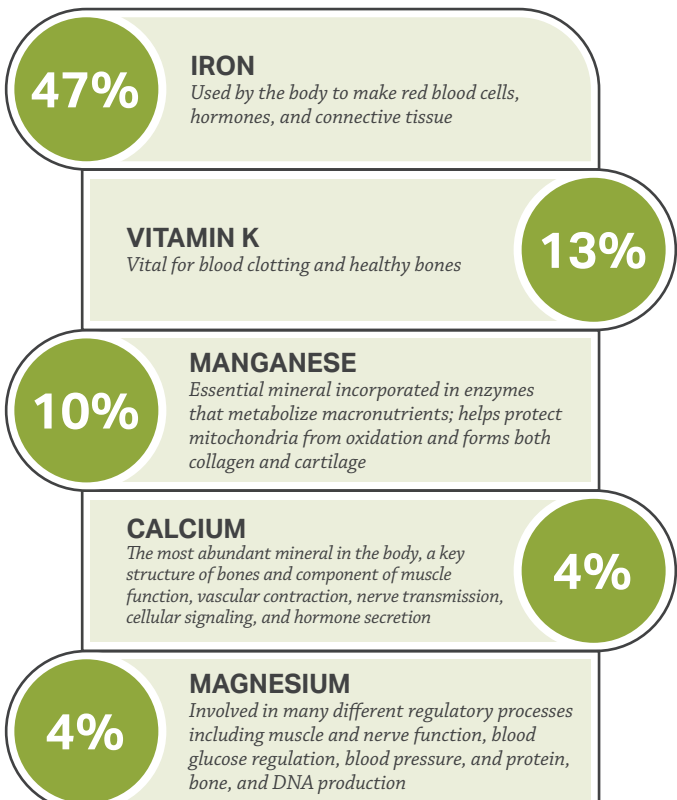


* Data is mean values from Phenol-Explorer Database¹

** Data on file with WholisticMatters
Values subject to change based on strain and experimental methods

Key Nutrients

Percentages shown as %DV per dry serving of 2.18g kale



Other Nutrients

In order of %DV per 2.18g kale

- Selenium
- Copper
- Fiber
- Folate
- Niacin
- Potassium
- Riboflavin
- Thiamin
- Vitamin B₆
- Phosphorus
- Zinc
- Choline
- Pantothenic acid
- Vitamin E



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

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REFERENCES

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.