ALFALFA

WholisticMatters®

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.

Phytoactives

Flavones

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

- **Apigenin**[1]
- **Luteolin**[1]
- **Adenosine**[1]

Chlorophyll

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

Saponins[2]

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

- **Soyasapogenol B**[3]
- **Soyasapogenol E**[3]
- **Medicagenic Acid**[3]
- **Bayogenin**[3]
- **Hederagenin**[3]
- **Soyasapogenol A**[3]
- **Soyasaponin I**[3]
- **Foumononetin**[3]
- **Zahnic Acid**[3]

Flavonols

Promote antioxidant activity and promote vascular health

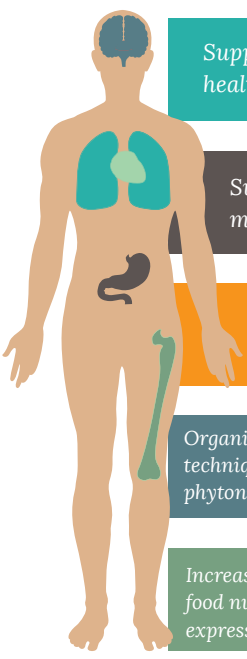
- **Quercetin** (17 mcg/g)*

Carotenoids

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

- **Beta Carotene** (0.87 mg/g)*
- **Alpha Carotene** (0.06 mg/g)*
- **Beta Cryptoxanthin** (0.06 mg/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.

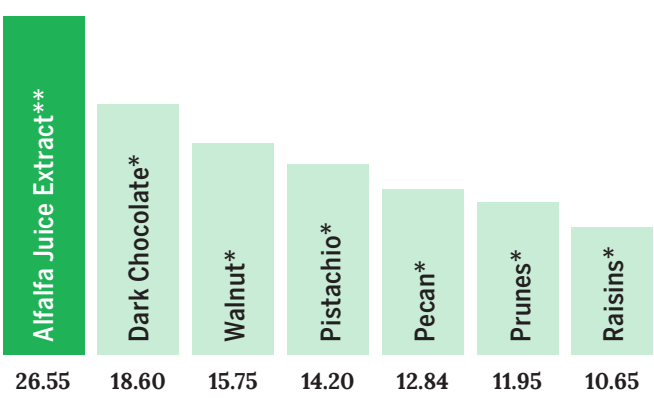
Gallic Acid Equivalence

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*[1]
*** Data on file with WholisticMatters*
Values subject to change based on strain and experimental methods

Key Nutrients

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

Manganese

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

28%

Biotin (Vitmain B7)

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

27%

Riboflavin (Vitamin B2)

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

14%

Copper

Essential mineral required for proper usage of iron in the body, neurotransmissions, and maturation of connective tissues.

10%

Pantothenic Acid (Vitamin B5)

Water-soluble vitamin important for energy metabolism, enzyme activation, signal transduction, and biosynthesis of fats and cholesterol.

8%

Other Nutrients

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

Magnesium
Calcium
Potassium
Iron
Thiamin (Vitamin B1)
Vitamin B6 (Pyridoxal 5'-phosphate)
Protein
Niacin (Vitamin B3)
Zinc
Selenium
Phosphorus
Choline
Fiber
Folate
Lipids
Carbohydrate

WholisticMatters®

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.

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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. Stochmal, A., et al., Alfalfa (Medicago sativa L.) Flavonoids. 1. Apigenin and Luteolin Glycosides from Aerial Parts. Journal of Agricultural and Food Chemistry, 2001. 49(2): p. 753-758.
3. Rafińska, K., et al., Medicago sativa as a source of secondary metabolites for agriculture and pharmaceutical industry. Phytochemistry Letters, 2017. 20: p. 520-539.
4. Bora, K.S. and A. Sharma, Phytochemical and pharmacological potential of Medicago sativa: a review. Pharm Biol, 2011. 49(2): p. 211-20.