



FERMENTED APPLE CIDER VINEGAR

500 mg

NPN 80024526

RESEARCH INFORMATION

Feature summary

Natural Factors Fermented Apple Cider Vinegar provides the traditional benefits of apple cider vinegar (ACV) in a convenient, easy-to-take capsule format.

ACV is a source of antioxidants for the maintenance of good health and has a long history as a home remedy for many ailments. It is used as a traditional digestive aid, helping to improve digestion and lower the body's storage of fat.

ACV is formed through the natural fermentation of apple juice, which results in a mixture of acetic and malic acids, a range of vitamins and minerals, and a haze of beneficial yeast and bacteria known as the ACV "Mother," which is responsible for its greatest health benefits. Even though vinegar is acidic, it has an alkalizing effect in the body. Neutralizing the pH of the body may be the reason behind ACV's traditional use.

Each capsule contains 500 mg of organic ACV standardized to 6% acetic acid and fermented with the "Mother" starter for maximum benefit. This non-GMO formula is a convenient choice for anyone who wants the health benefits of ACV without the hassle or acidic flavour of liquid forms.

How it works

ACV contains a range of nutrients, including antioxidant flavonoids, vitamins, and mineral salts (Budak et al., 2014; Hadi et al., 2021). The antioxidants in ACV function by quenching free radicals, helping to protect the body from oxidative stress (Budak et al., 2014). Unpasteurized ACV retains the fermentation "Mother," a layer of extracellular cellulose formed by acetic acid bacteria, making it especially rich in the key bioactives responsible for many of ACV's beneficial effects (Morgan & Mosawy, 2016).

ACV also contains organic acids, such as malic and acetic acids. Acetic acid contributes to ACV's antihyperglycemic function by encouraging glycogen uptake into the muscles and liver and reducing the breakdown of starches into simple sugars during digestion (Hlebowicz et al., 2007). In addition, acetic acid has been found to suppress body fat accumulation in animal and human studies (Kondo et al., 2009). ACV modulates blood sugar levels by slowing the rate of gastric emptying, modifying the way the cells use glucose, stimulating insulin secretion, and reducing glucose production by the liver (Hadi et al., 2021). ACV stimulates bile excretion for the digestion of dietary fats and modifies both the breakdown and formation of lipid molecules (Hadi et al., 2021).

Research

ACV has been used therapeutically for thousands of years and continues to be a popular home remedy and digestive aid today (Yagnik et al., 2018). ACV is made through the fermentation of crushed apples and contains natural, organic acid content that encourages the breakdown of food and slows gastric emptying when taken with meals (Hadi et al., 2021). A controlled two-week study involving patients with blood sugar disorders examined the effect of taking 30 mL of ACV 10 minutes before eating a breakfast of rice pudding. It was found that gastric emptying, measured by ultrasonography, was 10% slower in patients who took the vinegar before eating (Hlebowicz et al., 2007).

ACV aids digestion by stimulating bile secretion. Bile emulsifies dietary fat, breaking it down into small minute droplets for easier absorption and assimilation (Hadi et al., 2021). Metabolic disorders caused by a high-fat diet are thwarted by taking ACV, which proves to have a satiating and hypoglycemic effect with benefits for body weight (Budak et al., 2014; Kondo et al., 2009). In a 12-week, randomized, placebo-controlled trial, obese adults were found to benefit from consuming vinegar twice per day following their breakfast and dinner. Compared to the placebo group, the adults who consumed vinegar with their meals reduced their blood triglyceride levels and lost weight, leading to reduced body mass index (BMI) and reduced waist and hip circumferences by the end of the study (Kondo et al., 2009).

In addition to its effects after eating, ACV has been shown to lower fasting blood glucose and lipid levels (Hadi et al., 2021). A systematic review and meta-analysis examined the data from nine studies on the effects of ACV supplementation on blood sugar and blood lipid levels. It was determined that participants who consumed 15 mL or more of ACV daily for more than eight weeks had almost 8 mg/dL lower fasting blood glucose levels than control participants. Additionally, ACV supplementation was found to reduce participants' total cholesterol levels by 6 mg/dL (Hadi et al., 2021).

ACV's antioxidant activity is attributed to its range of antioxidant flavonoids, acids, and vitamins. Animal studies confirm this function, with one showing that daily supplementation offered protective benefits for rats with elevated levels of reactive oxygen species because of high chronic stress. Compared to controls, rats supplemented with ACV were found to have lower blood markers of oxidative stress and higher activity levels of the antioxidant superoxide dismutase (SOD) (Abdulrauf et al., 2018).

ACV has been valued for its infection-fighting properties since ancient times. This use is now supported by laboratory studies that have identified ACV's antifungal and antibacterial activities, such as the ability to damage and reduce the colonization of microbes (Yagnik et al., 2018). In one study, ACV demonstrated antibacterial properties against *Escherichia coli*, *Staphylococcus aureus*, and *Candida albicans*, along with reducing their negative impact on the generation of inflammatory cytokines (Yagnik et al., 2018).

Ingredients

Each capsule contains:

Apple cider vinegar powder (<i>Malus sylvestris</i>) (fruit)	500 mg
Vitamin C	1–3 mg*
Potassium	300–450 mcg*
Boron	4–8 mcg*

* The quantity of vitamin C, potassium, and boron may vary. These are the expected ranges.

Dosage

Recommended adult dose: 2 capsules 3 times daily, preferably with plenty of water, or as directed by a health care practitioner. Consult a health care practitioner prior to exceeding the recommended dose.

Cautions

Do not use if you are pregnant or breastfeeding. Keep out of the reach of children.

References

- Abdulrauf, R.A., Dawud, F.A., Emmanuel, N.S., et al. (2018). Lipid peroxidation and some antioxidant enzymes evaluation in apple cider vinegar (ACV) treated male and female wistar rats exposed to chronic restraint stress. *Adv Enzyme Res*, 6(3), 21-8.
- Budak, N.H., Aykin, E., Seydim, A.C., et al. (2014). Functional properties of vinegar. *J Food Sci*, 79(5), R757-64.
- Hadi, A., Pourmasoumi, M., Najafgholizadeh, A., et al. (2021). The effect of apple cider vinegar on lipid profiles and glycemic parameters: A systematic review and meta-analysis of randomized clinical trials. *BMC Complement Med Ther*, 21(1), 179.
- Hlebowicz, J., Darwiche, G., Björgell, O., et al. (2007). Effect of apple cider vinegar on delayed gastric emptying in patients with type 1 diabetes mellitus: A pilot study. *BMC Gastroenterol*, 7, 46.
- Kondo, T., Kishi, M., Fushimi, T., et al. (2009). Vinegar intake reduces body weight, body fat mass, and serum triglyceride levels in obese Japanese subjects. *Biosci Biotechnol Biochem*, 73(8), 1837-43.
- Morgan, J., & Mosawy, S. (2016). The potential of apple cider vinegar in the management of type 2 diabetes. *Int J Diabetes Res*, 5(6), 129-34.
- Yagnik, D., Serafin, V., & Shah, A.J. (2018). Antimicrobial activity of apple cider vinegar against *Escherichia coli*, *Staphylococcus aureus* and *Candida albicans*; downregulating cytokine and microbial protein expression. *Sci Rep*, 8(1), 1732.