



Nutriline-Piperene

PURE BLACK PEPPER EXTRACT

FOR INCREASED ABSORPTION AND BIOAVAILABILITY

Nutriline-Piperene is pure piperene extracted from black pepper corns of Piper Nigrum by Novo's SCFE extraction process. A rich source of beneficial phytonutrients, piperene is a white crystalline compound of piperidine and piperic acid and contains piperene content of 95% or more (raw forms of peppers contain only 3-11% piperene content). Piperene is known to be a powerful theronutrient that enhances the ability of the body to absorb nutrients. Piperene greatly increases the bioavailability of other compounds such as vitamins, minerals, and herbal substances (from 30 to 250% via a process called thermogenesis).

Product Code	Piperene content	Remarks
BP 001	> 95%	Powder
BP 002	> 90%	Powder

Health benefits

Piperene is beneficial in the treatment of fevers, digestive disorders, urinary difficulties, rheumatism and neuralgia. Black pepper extract has also been used extensively in ayurvedic medicine to treat aging, under consumption, weakened immune system, general weakness, healing of wounds, reducing inflammation, improving digestion, pain alleviation and relief from asthma.

Nutritional materials that may be co-administered with Piperene

Piperene increases absorption and can be co-administered with herbal extracts (curcumin, ashwagandha, ginkgo biloba and capsaicin), water-soluble vitamins (vitamin B1, vitamin B2, niacinamide, vitamin B6, vitamin B12, folic acid and vitamin C), fat-soluble vitamins (vitamin A, vitamin D, vitamin E, and vitamin K), antioxidants (vitamin A, vitamin C, vitamin E, beta-carotene, beta-cryptoxanthin, lycopene, lutein/zeaxanthin, selenium and zinc), amino acids (lysine, isoleucine, leucine, threonine, valine, tryptophan, phenylalanine, and methionine) and minerals (calcium, iron, zinc, vanadium, selenium, chromium, iodine, potassium, manganese, copper and magnesium).

Novo's SCFE Process for Superior Product

Nutriline-Piperene is produced at Novo's 1000 tpa Super Critical Fluid Extraction (SCFE) plant in India. The SCFE process is widely regarded as the best process for extraction.

- ▶ SCFE process extracts piperene such that it remains intact and at its highest level of concentration and purity.
- ▶ Concentrated extract is exclusively composed of the raw material ingredients and can be used in low dosage.
- ▶ Concentrated extracts can be easily assimilated by the human body.
- ▶ The process is gentle on active ingredients since extraction is at high pressure and low temperature and creates no environmental hazards.
- ▶ The extraction agent, CO₂, is GRAS certified, non-toxic, non-flammable and acceptable for use in food and beverages.
- ▶ CO₂ is free of bacterial content and microbiological activities.



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