***ElderMune**

Elderberry Immune & Digestive Support | 65:1 Concentrate





















Introduction

ElderMune® is an innovative new product containing elderberry juice concentrate combined with Sunfiber® (partially hydrolyzed guar fiber) as a soluble fiber. This synergistic combination of Elderberry for immune support and Sunfiber®, a prebiotic dietary fiber, improves digestibility and helps with the absorption of the elderberry nutrients. Additionally, ElderMune® has a demonstrated prebiotic effect, and is suitable for use as a low dose prebiotic, due to its high polyphenol content.

Features & Benefits

ElderMune® is a solvent-free concentrate that contains all the elderberry components, including polyphenols and anthocyanins, unlike an extract that contains limited elderberry actives.

ElderMune® does not contain maltodextrin, which is commonly used in spray-dried elderberry juice concentrate powders. Instead, it is fortified with Sunfiber®, an extensively studied functional fiber with numerous benefits.

Sunfiber®, a prebiotic, soluble dietary fiber, helps replace the natural elderberry fiber lost during the juicing process. Other elderberry juice concentrates are devoid of fiber.

The elderberry concentrate has a high concentration ratio of 65:1 (65 grams of pure elderberry fruit makes 1 gram of the elderberry concentrate used in ElderMune®).

A 100 mg dose of ElderMune® is made from an industry-leading 4,200 mg of elderberry fruit.

ElderMune® has been tested to be free of Prunacin and Holocacin by HPLC-MS/MS. These compounds are metabolites of cyanide, which could be present if the elderberry is not properly processed.

The elderberries in ElderMune® are TRU-ID® certified as authentic. ElderMune® is free of purple dyes, unlike some adulterated products on the market.

ElderMune® is made using an exclusive drying process utilizing aninfrared, low temperature drying technology that helps to preserve key antioxidants – polyphenols and anthocyanins.

In tests, ElderMune® powder was found to have more polyphenol content than other elderberry powders. This is due to the low temperature drying process which retains much more of these sensitive active components.

Formulating with ElderMune®

The recommended dose for ElderMune[®] is 100-1,000 mg/serving. The product can be formulated into capsules, tablets or gummies for immune support between 100 and 500 mg. ElderMune[®] works well in a syrup to compete against the leading brands at a dose of 1,000 mg.

ElderMune® can be combined with BGF-Immune®, InoPhyte®, SunActive® Zinc, ButyraGen™ or probiotics to offer other unique immune and digestive health products.

ElderMune® also works well as a low dose prebiotic and can be combined with probiotics for a synbiotic effect.



Mechanism of Action

The powerful antioxidants present in elderberry – the anthocyanins and polyphenols in particular, work to reduce free radicals and support the immune system. In-vitro studies show that elderberry has a direct antiviral effect against the influenza virus. By blocking key viral proteins responsible for viral attachment and entry into the host cell, elderberry inhibits the early stages of an infection. As a low dose prebiotic, ElderMune[®] acts through its polyphenols to deliver a prebiotic effect, generating short chain fatty acids (SCFAs).

Elderberry Science

The science on elderberry is strong. Randomized, double-blind, placebo-controlled clinical studies using elderberry supplements have shown reductions in sick days and reductions in cold and flu symptoms by about four days. In a meta-analysis, elderberry supplementation was shown to substantially reduce upper respiratory symptoms.

Recently, we completed an in-vitro immunomodulatory and anti-viral study on ElderMune[®]. In this study mice macrophages were activated by lipopolysaccharide LPS and then the immunomodulatory and antiviral responses were measured in the presence of ElderMune® versus controls. The study showed that ElderMune® inhibited the expression of cytokines. TNFα, IL-6 and IL-1b in a dose-response manner, ElderMune® demonstrated a direct immunomodulatory or anti-inflammatory effect. In the anti-yiral part of the study, ElderMune® inhibited the activity of adenovirus in a dose-response manner, indicating a direct anti-viral effect.

ElderMune® has also been studied in an in-vitro simulation of the fermentation that occurs in the colon. Human stool from volunteers was used as a microbiome starter culture, ElderMune® was added to the system, then fermentation parameters and metabolites were measured after 48 hours. The study statistically significant increase in total SCFAs at the high dose after only 48 hours with a corresponding significant decrease in pH compared to control. At the lower dose a significant decreased pH and a decreased variation in SCFA production between donors was observed, this demonstrates an expectation of lower impact of responders and non-responders.

Certifications & Quality Assurance

Certified Organic option available	
Gluten Free	
Vegan	
Non-GMO Project Verified	
Kosher	
TRU-ID® Certified	

Α

Applications	
Dietary Supplements	
Functional Foods & Beverages	
Candies & Gummies	
Sachets	
Syrups and Liquids	•

Clean Label

ElderMune® does not contain maltodextrin. ElderMune® contains only: Elderberry Juice Concentrate 65%, Sunfiber® 34%, Silicon Dioxide 1% (flow agent)

Safety

Dried elderberry juice concentrates in syrups and powders have been consumed in moderation for immune support without ill-effects. The safety of Sunfiber® has been well-established.

Structure/Function Claims

Supports healthy immune function
Supports healthy digestion
Demonstrates a prebiotic effect
Excellent source of polyphenols & anthocyanins

Product Characteristics

The elderberry concentrate to Sunfiber® ratio is 65:34, with 1% silicon dioxide added as a flow agent. It is an extremely free flowing powder with low water activity for ease in processing. It readily dissolves in water to form a palatable, slightly sweet, purple solution.

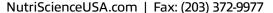
Source

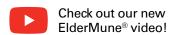
ElderMune® elderberries are grown in Europe and processed in the United States. The elderberry supply chain is fully traceable, with complete control of each step, from the farm to NutriScience. Sunfiber® is sourced from the guar plant in India.

Regulatory

Elderberry fruit and Sunfiber® are GRAS. Elderberry is listed in AHPA's Herbs of Commerce 1st Edition 1992 and is thus an ODI (Old Dietary Ingredient) suitable for use in a dietary supplement. Sunfiber® (partially hydrolyzed guar fiber) is self-affirmed GRAS and is an FDA-approved form of dietary fiber.









© 2020 NutriScience Innovations LLC. The information contained herein is intended for business-to-business only and is not intended for consumers or other third narties. NutriScience Innovations LLC does not sell products to consumers. This information may not be 2 2021 Autorocente in involvations, Ltd. The intermination of undersity of the information of the information in whole or part without the express written permission of Nutriscience Innovations, Ltd. Although the information provided is, to the best of our knowledge, truthful and accurate, Nutriscience Innovations, Ltd. does not guarantee it as accurately and provides no express or implied warranties. Nutriscience Innovations, Ltd. assumes no responsibility for buyer's use of structure/function and product claims. Companies must consult with legal counsel to ensure that such claims are lawful. The statements contained herein have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease. ElderMune® is part of an exclusive portfolio of proprietary ingredients from NutriScience Innovations, LLC and is a product and registered trademarks of Innovative Natural Solutions, LLC (INS Farms). Sunfiber® and SunActive® are registered trademarks of Taiyo International, Inc. BGF-Immune®, InoPhyte® and ButyraGen™ are trademarks of NutriScience Innovations LLC.