



Organic Reishi, Maitake, & Oyster Mushroom Blend for Prebiotic & Immune Health



Introduction

TriCelium™ is a new, innovative, organic certified prebiotic from a blend of three mushrooms – reishi (*Ganoderma lucidum*), maitake (*Grifola frondosa*), and oyster (*Pleurotus ostreatus*). This blend supports both immune and digestive health. TriCelium™ has been studied for its prebiotic effects and the role it plays in upregulating short chain fatty acid (SCFA) production.

Medicinal mushrooms have been used for thousands of years in Eastern medicine. They are known for supporting healthy sleep, anxiety, focus, immune health, digestive health and more. Recently, there has been a rising demand from western consumers for mushroom based supplements as the health benefits have become more widely understood. Reishi and Maitake mushrooms are two of the most popular medicinal mushrooms with clinical studies supporting both immune and digestive health, among other areas. Oyster mushrooms are gaining popularity in the natural products space and are known to contain immune boosting beta-glucans. The mushrooms used in TriCelium™ are rich in carbohydrates, like chitin, hemicellulose, β and α -glucans, mannans, xylans, and galactans, which make them an ideal prebiotic source. As a prebiotic, the mushrooms in TriCelium™ stimulate the growth of gut microbiota, helping to support a healthy gut microbiome.

Features & Benefits

TriCelium™ is a whole mushroom product – it consists of both the mycelium and fruiting bodies for each of the mushrooms

TriCelium™ utilizes reishi, maitake and oyster mushrooms, which have all been studied both for their immune supporting and digestive health properties

The mushrooms are USDA Certified Organic and are grown under controlled conditions

TriCelium™ has been studied and demonstrated an increase in the production of SCFAs, in particular butyrate, in an in-vitro prebiotic model

TriCelium™ has been demonstrated to be effective as a prebiotic at low doses of 500 – 1,500 mg

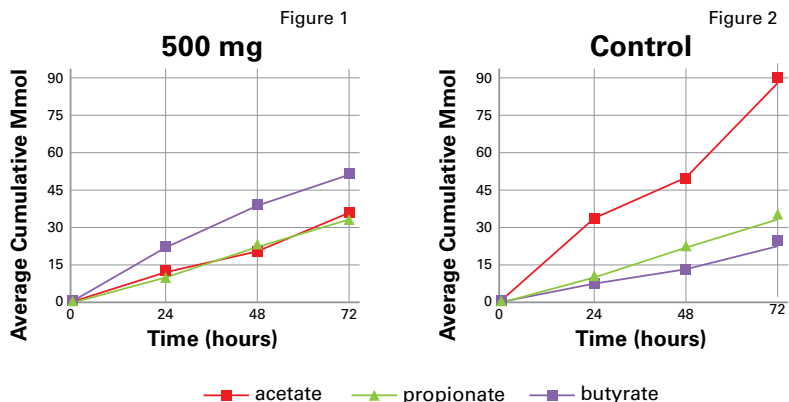
TriCelium™ is a powder which can easily be formulated in various food, beverage and supplement formats



Mushroom Science

The immunomodulatory effects of mushrooms have been well established. Reishi and maitake mushroom science in particular is very extensive. Studies have shown that reishi mushrooms suppress the secretion of TNF- α and IL-6. Maitake mushroom studies have shown an increase in immune defense.

The prebiotic effects of mushrooms have also been established. We studied the prebiotic effect of our specific TriCelium™ mushroom blend in a validated dynamic in-vitro model of the colon. Even at the low dose of 500 mg, the model demonstrated SCFA production, with butyrate production higher than acetate and propionate production (Fig 1). This contrasts with the control, where butyrate production was lower than acetate or propionate (Fig 2).



Mechanism of Action

The beta-glucans present in mushrooms are believed to be responsible for the immunomodulatory and digestive health effects. SCFAs, and in particular, the generation of butyrate has been implicated as a primary mechanism for both immune and digestive support, by increasing gut barrier function, as well as its signaling properties. TriCelium™ contains >15% beta-glucans.

Product Characteristics and Formulating with TriCelium™

TriCelium™ is a fine, light brown powder (60 Mesh) with a characteristic light mushroom taste. It is dried at a 10:1 ratio. It is easily formulated into capsules, tablets, stick packs, powders, etc.

TriCelium™ can be combined with other immune boosting ingredients such as BGF-Immune® and Shoden® Ashwagandha. For digestive health, TriCelium™ can be combined with Sunfiber®.

Applications

Dietary Supplements

Functional Foods & Beverages

Structure/Function Claims

Contains beta-glucans for immune support

Supports a healthy immune system

Supports healthy digestion

Supports a healthy microbiome

Prebiotic beta-glucan helps to produce SCFAs including acetate, propionate and butyrate in the colon

Improves gut barrier function

Quality Assurance

TriCelium™ is grown under controlled conditions on a substrate of organic sorghum without any pesticides. It is tested for micro and heavy metals. It contains >15% beta (1,3) (1,6) glucans. It has a shelf life of 5 years.

Source & Clean Label

Contains the mycelium and fruiting bodies of all three mushrooms (whole mushrooms). Grown under controlled conditions in the USA. USDA certified organic.

Safety & Regulatory

Reishi (*Ganoderma lucidum*), maitake (*Grifola frondosa*), and oyster (*Pleurotus ostreatus*) mushrooms are all edible mushrooms. TriCelium™ is self-affirmed GRAS.

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NutriScience
Ingredients Matter.

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