



REISHI *Ganoderma lucidum* / Ling Zhi



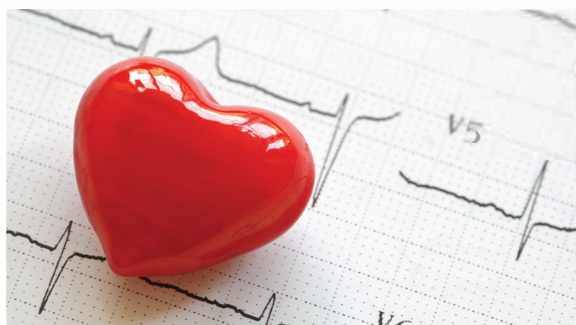
M2 Ingredients Inc. grows and processes our 100% Organic Reishi mushroom in its BRC Certified indoor farm located in Carlsbad, California. Reishi's formal taxonomic name is *Ganoderma lucidum* – from the Greek roots of “brightness, sheen and derma or skin which describe this shiny woody mushroom. The Chinese name, Ling Zhi, means “herb of spiritual potency” – which refers to the adaptogenic effects of this most highly revered, superior tonic. In Traditional Chinese Medicine (TCM), Reishi is known as a “three treasure” herb that harmonizes jing (life force), qi (energy) and shen (spirit) – it is often referred to as the “Elixir of Life” and the “Mushroom of Immortality”

Reishi has been well researched for its diverse array of polysaccharides and triterpene compounds. Zhou et al (2002) isolated more than 100 polysaccharides and 119 triterpene compounds from Reishi. The polysaccharides have been shown to both potentiate and modulate the immune system – acting to support and balance. Research related to triterpene activity has demonstrated adaptogenic effects to support blood pressure management, anti-allergenic properties and mood. Reishi has also been reported to balance endocrine function and hormonal balance.



IMMUNE SUPPORT

The immune-modulating effects of *G. lucidum* polysaccharides are extensive, including promoting the function of antigen-presenting cells, mononuclear phagocyte activation, humoral immunity and cellular immunity (Lin 2005). A variety of complex polysaccharide compounds in Reishi have been shown to stimulate the immune system by activating immune cells such as macrophages and helper T-cells, as well as increasing immunoglobulin levels to produce a heightened response to foreign, non-self cells (Chen 2004, El-Mekkawy 1998, Eo 2000, Lin 2004, Rubel 2010 Zhi 2007). Reishi appears to modulate T-cell activation by acting directly on monocytes. Its polysaccharides have been credited by several researchers with promoting splenic B cell activation and antibody secretion, specifically stimulating tumor necrosis factor (TNF)-alpha and IL-6 production and IFN-gamma release.



CARDIOVASCULAR SUPPORT

Reishi is highly regarded for its cardiotonic properties (Boh 2007). Researchers have reported that various active compounds in Reishi, especially triterpene compounds, can function to lower blood pressure, lower cholesterol, inhibit atherosclerosis and inhibit platelet aggregation. Reishi has also been reported to improve blood flow and lower oxygen consumption in the cardiac muscle.



ADAPTOGENIC EFFECTS

Reishi is regarded in Traditional Chinese Medicine (TCM) as being the premier adaptogen of the entire Chinese pharmacopeia. Adaptogens are natural substances that enable our bodies to overcome and adapt to various physical, chemical and biological stress factors. Reishi mushrooms contain polyphenol antioxidants, polysaccharides, polypeptides, triterpenes and other compounds that through actions known as mediation, down-regulation and up-regulation work together to provide the perfect adaptogenic responses to stress. Reishi, in particular, is highly regarded for its support of the entire endocrine system, especially in regards to the adrenal cortex so that the levels of stress hormone cortisol and also adrenalin are kept in balance.

M2 INGREDIENTS

Founded in 2010, M2 Ingredients, Inc., is a leading producer of certified 100% organic, whole food mushroom powders with the full spectrum of bioactive compounds to support daily health, sports performance, recovery and cognition. The Company's cutting-edge innovation in product development is made possible by the team's extensive technical expertise and its proprietary growing methodology. Eleven species of certified 100% organic mushrooms are grown, dried, milled and packaged in its cGMP certified state-of-the-art facility in Carlsbad, California.

Available in single species and custom blends, M2 Ingredients' products represent a commitment to offer the world's highest quality mushroom powders with health benefits for people and their pets. The Company's award-winning and scientifically studied mushroom powders have been used in supplements and food products for people and animals throughout the world.



PRODUCT SPECIFICATIONS

	Positive ID to species using DNA sequencing
% Moisture	< 6% moisture
Particle Size	≥ 95% through 60 mesh
Gluten	< 20 ppm
TPC	≤ 5,000 cfu/g
Yeast & Mold	≤ 500 cfu/g
Coliforms	≤ 100 cfu/g
Pathogens (Salmonella, Staph, E. coli)	Absent / 25 g
Arsenic (As)	≤ 0.25 ppm
Cadmium (Cd)	≤ 0.1 ppm
Lead (Pb)	≤ 0.1 ppm
Mercury (Hg)	≤ 0.1 ppm

SENSORY SPECIFICATIONS (S3)

Appearance	Powder
Color	Brown
Aroma	Mild/Earthy
Flavor	Slightly Bitter / Nutty / Earthy
Texture	Powdery

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APPLICATIONS

CAPSULES, POWDERS, BARS, BEVERAGES, SNACKS AND FOOD