



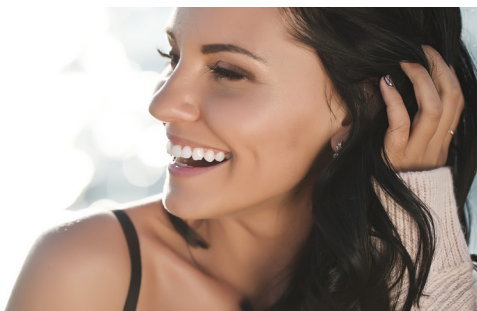
# CHAGA *Inonotus obliquus*



Chaga grows in nature as a parasite on birch and a few other species of temperate forest trees. The blackish, tumor-like growth that is chopped from the birch trees is not the fruit body stage (sexual, spore-producing stage of the mushroom's life cycle), but is rather a hardened mass of mycelium (asexual, vegetative stage of the mushroom life cycle). The actual fruit bodies of Chaga often form under the tree's bark and are short-lived and seldom seen. The slow-growing mushroom can take 15 to 20 years to reach maturity when growing on birch trees—ample time for the mushroom to accumulate residues from insect and other forest animal activity and to bio-accumulate potentially harmful levels heavy metals, pesticide residues, and radioactive

isotopes if it is growing in a polluted environment. Mushrooms have the ability to bio-accumulate health-promoting and also health-damaging toxins.

The cultivation of Chaga on organic grain substrates in indoor farms using filtered air and filtered water offers a safer alternative to wild harvested Chaga. Cultivated Chaga does not contain any betulinic acid that is derived from betulin in birch tree bark but due to the low solubility of betulinic acid and its poor assimilation when consumed orally, we do not consider this to be a significant factor in the overall health-promoting properties of Chaga. Cultivated Chaga also has a much more pleasant and nutty taste than wild Chaga and is much easier to incorporate into your daily health regimen than the very hard and bitter wild Chaga.



## CHAGA ANTIOXIDANTS PROTECT AGAINST OXIDATIVE STRESS

Chaga is reported to contain the highest levels of antioxidants—even higher than blueberries and acai. Antioxidants including glutathione, ergothioneine, polyphenols, flavonoids, superoxide dismutase neutralize oxidative stress caused by free radical compounds that contribute to illness and accelerated aging. Analyses of cultivated Chaga mycelium grown on grain substrates have reported that it has antioxidant content and effects similar to that of wild-harvested Chaga.



## IMMUNE SUPPORT

Cultivated Chaga provides immune-modulating beta glucan compounds that support immune function by a host-mediated response that involves potentiation of various immune cells and an up-regulation of immune cell signaling events. Recent third-party testing of our un-extracted, whole food Chaga mushroom powder reported a beta glucan contents as much as 28%. Prebiotic dietary fibers, sterols, peptides, antioxidants, peptides, fungal alpha glucans and selenium compounds provide additional immune support.

## CHAGA INCREASES PHYSICAL ENDURANCE

Animal studies have reported that Chaga increased exercise tolerance. Animals dosed with Chaga were able to swim for a longer period of time when compared to a control group. The animals treated with Chaga also had higher energy stores in their muscles and livers.



## CHAGA PROMOTES HEALTHY AGING

The combined action of the antioxidants, immune-modulating beta glucans, prebiotic dietary fibers, micronutrients and other compounds in un-extracted, nutrient-dense, un-extracted, whole food Chaga mushroom help to slow aging processes and support vitality.

# 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

[M2INGREDIENTS.COM](https://m2ingredients.com)



**APPLICATIONS**

**CAPSULES, POWDERS, BARS, BEVERAGES, SNACKS AND FOOD**