

The True Nutritional Value of Chaga (*Inonotus obliquus*): An Evidence Review for MarieLandrySpyShop.com

Chaga is not a meaningful nutritional food. It is a woody, fibre- and lignin-dominated material with very little protein, fat or digestible energy. It is a real but variable source of specific bioactive compounds (polysaccharides/ β -glucans, phenolics, melanin-type pigments, lanostane triterpenoids). It is best classified as a supplement whose clinical benefits are not established, and whose one well-documented serious harm — oxalate kidney injury at high, sustained powder doses — is more firmly proven than any of its health claims.

TL;DR

- **Nutrition:** The only full proximate breakdown we could trace (Chen, reported in Lu et al., *Polymers* 2021) gives dried chaga about 2.4% crude protein, 1.7% fat, 10.4% ash and 67.5% crude fibre. A 2–5 g serving supplies only a few kilocalories and trivial macronutrients. Some minerals (potassium, magnesium, manganese) are present in whole chaga, but how much carries into tea has not been well measured.
- **Health claims:** Antioxidant, immune, anti-inflammatory, blood-sugar, cholesterol and anticancer effects come almost entirely from cell and animal studies. No modern randomized controlled trial shows a clinical benefit in humans. Memorial Sloan Kettering and the ASCO Post both say clinical trials are still needed.
- **Safety and regulation:** Measured oxalate in commercial chaga powders ranged from 2.8 to 14.2 g/100 g (Lee et al., *J Korean Med Sci* 2020). At least three biopsy-confirmed cases of oxalate nephropathy followed daily powder intake for months. Hot-water tea appears to deliver far less oxalate than eating the powder. Health Canada's Mushrooms monograph caps chaga at 3.6 g of dried material per day, and that cap is a sensible ceiling for consumers.

Key Findings

1. **Detectability is not nutritional significance.** Chaga contains a long list of "detected" nutrients (34 elements measured by AES, ICP-MS and neutron activation in Zeyle et al., *Chemistry of Plant Raw Material* 2022; vitamins first reported only in 2021). Almost none have been quantified in whole sclerotium in a way that shows a serving meets a meaningful share of daily needs.
2. **The material is mostly not fungus.** NAMA's toxicology chair, citing Glamočlija et al. (2015), describes the harvested conk as "at most 10% mushroom mycelium, the rest is woody material produced by the birch tree." namyco Glamočlija et al. themselves concluded that because fungal presence in conks "is limited, further purification is necessary to draw quantitative conclusions." sciencedirect
3. **Composition varies widely** by host tree, geography, conk layer, product type and processing. Single-sample values should never be presented as universal "Chaga nutrition facts."
4. **Commercial labels conflict with lab data.** One retail chaga powder label implies about 20 g protein/100 g (3 g protein per 15 g serving). recipal Laboratory proximate data show about 2.4 g/100 g. semanticsscholar Labels are not reliable composition evidence.
5. **Many supplements are not chaga sclerotium at all.** In a 2025 multi-technique comparison of North American chaga supplements (Windsor et al., *Int J Mol Sci* 2025; most authors work for the chaga supplier Nammex), authentic wild chaga contained about 5.7–11.9% β -glucans (Megazyme K-YBGL assay) and less than 2% α -glucans. Mycelium-on-grain products contained 1.0–6.9% β -glucans and 33–68% α -glucans/starch, i.e., largely the grain substrate.
6. **Biological activity is not clinical efficacy.** Every major claim rests on in vitro or rodent work, uncontrolled

Soviet-era clinical series, or ex vivo experiments on human cells. [namyco](#) [nih](#)

Details

1. Biological identity and sample quality

Taxonomy and lifecycle. *Inonotus obliquus* (Hymenochaetaceae) is a white-rot fungus. [nih](#) The black, cracked "chaga" harvested from living trees is a sterile conk (sclerotium/canker), not a fruiting body. Its black colour comes from melanin. [Wikipedia](#) [nih](#) The fungus degrades cellulose, hemicellulose and lignin in the host's heartwood. [nih](#) The fertile fruiting body forms under the bark only after the tree dies. NAMA notes this can be "anywhere from ten to eighty years after the initial infection." [namyco](#) Chaga grows mainly on birch (*Betula papyrifera* in New Brunswick). It also occurs on alder, beech, ash and hornbeam. [nih](#) [nih](#) The 2025 supplement study notes that "all chaga is harvested wild (wildcrafted), and currently no chaga has been successfully cultivated" on a commercial basis. [nih](#)

Fungal tissue vs. host material vs. products. Three different materials are all sold as "chaga":

- **Wild sclerotium.** Contains fungal tissue plus birch-derived compounds. Betulin and betulinic acid are thought to come from the birch. [functionalmushrooms](#) [realmushrooms](#)
- **Cultured mycelium.** Lab-grown fungal tissue, chemically different. NAMA notes that cultivated chaga "lacks the betulin produced by the tree, and also lacks betulinic acid and phytosterols." [namyco](#)
- **Mycelium fermented on grain (MFG).** Often mostly cereal substrate (see Key Finding 5).

Variability.

- **Host tree:** Chaga from *Betula pendula* and *B. pubescens* differed significantly in lanosterol, inotodiol and betulin content (Raal et al., *Pharmaceuticals* 2024, Estonian chaga).
- **Conk layer:** Total triterpenes were 6.38–10.22 mg/g in the epidermis (outer crust) vs. 11.25–14.94 mg/g in internal tissue across five sclerotia from Jilin, Inner Mongolia and Heilongjiang, China (Zhang et al., *FEMS Microbiol Lett* 2023). Zeyle et al. (2022) also found that "the concentration of elements is highest in the outer layer of the fungus."
- **Geography:** Glamočlija et al. found that the dominant organic acid shifted from oxalic acid (Russian, Finnish samples) to p-hydroxybenzoic acid (Thai sample). [namyco](#)
- **Drying:** Drying method changed measured phenolic and sugar content of chaga powder: Lee et al. (*Preventive Nutrition and Food Science* 2007) found that freeze-dried powder had significantly lower total phenolics and total sugar than vacuum- or hot-air-dried powder. A separately circulated range of 0.545–1.293 g GAE/100 g dry matter could not be confirmed against that paper.

Authentication and adulteration. The BC Centre for Disease Control (BCCDC) warns that chaga has been confused with *Phellinus* species, *Daldinia*, corky bark disease, black knot and other tree galls. Once ground, misidentified material cannot be checked by eye. [bccdc](#) In the lab, β -glucan/ α -glucan ratios, starch tests, HPLC fingerprints and marker triterpenes can separate real sclerotium from grain-based or counterfeit products. [nih](#) [whuznhmedj](#) A Korean HPLC method proposed minimum quality criteria of 1.165 mg/g inotodiol and 1.717 mg/g 3 β -hydroxylanosta-8,24-dien-21-al. [springeropen](#)

2. Nutritional composition table (dried material unless noted)

Component	Best available value	Sample type	Method	Source	Reliability
				Chen, via Lu	

Moisture	3.5%	Raw material, origin unstated	Gravimetric (implied)	et al., <i>Polymers</i> 2021	Low (single secondary report)
Energy	~80–100 kcal/100 g (calculated)	Derived from proximate data	Atwater factors on available carbohydrate	Calculated here	Low; estimate only
Crude protein	2.4 ± 0.4 g/100 g	Raw material	Not stated (likely Kjeldahl)	Chen via Lu et al. 2021	Low–moderate. Consistent with the 2023 New Brunswick analysis describing chaga as "protein-poor" (low N)
Amino-acid profile	No measured profile found for wild sclerotium	—	—	—	No evidence
Crude fat	1.7 ± 0.25 g/100 g; one review range cites 2.76% lipid	semanticscholar researchgate Raw material	Not stated	Chen via Lu et al. 2021; review compilations	Low; no fatty-acid profile of sclerotium located
Ash	10.4 g/100 g; ranges 11.6–15% reported	semanticscholar researchgate Raw material	Gravimetric	Lu et al. 2021; review compilations	Moderate (consistent across reports)
Crude fibre	67.5 ± 0.95 g/100 g	semanticscholar Raw material	Crude fibre (not AOAC dietary fibre)	Chen via Lu et al. 2021	Low–moderate. Method underestimates total dietary fibre
Lignin	25–37.6% (acid-resistant lignin 25–30%)	frontiersin researchgate Sclerotium	Gravimetric	Shashkina et al. 2006 review; compilations	Moderate
Hemicellulose / cellulose	~12.5% / ~2%	researchgate Sclerotium	Not stated	Review compilations	Low
Polysaccharide (total)	10.3 ± 0.4 g/100 g	semanticscholar Raw material	Colorimetric	Chen via Lu et al. 2021	Low
	5.7–11.9				

β -glucans	g/100 g (Megazyme K-YBGL); 13.7–15.3 g/100 g "crude β -glucan" (gravimetric)	Wild chaga (6 samples); single sample	Enzymatic vs. gravimetric	2025 supplement comparison; Rhee et al. 2008	Moderate–good: best-characterized bioactive. Gravimetric values run higher
Potassium	Reported as ~50% of ash, i.e., roughly 5% of dry mass (a 9–10% figure also circulates and looks inconsistent)	frontiersin Whole chaga	XRF/AAS/gravimetric	Shashkina et al. 2006, via <i>Frontiers in Pharmacology</i> 2023	Low; conflicting figures
Magnesium	~0.64% ($\approx$ 640 mg/100 g)	frontiersin Whole chaga	XRF/AAS	Shashkina et al. 2006 (secondary)	Low
Calcium	~0.37% ($\approx$ 370 mg/100 g)	frontiersin Whole chaga	XRF/AAS	Shashkina et al. 2006 (secondary)	Low
Manganese	~0.02% ($\approx$ 20 mg/100 g); ~1.2% of ash	frontiersin researchgate Whole chaga	XRF/AAS	Shashkina et al. 2006 (secondary)	Low
Fe, Zn, Cu, Se	"Traces"; antioxidant-mineral sum 85.9–113.9 μ g/g DW in extracts	Pressurized-water extracts (Newfoundland chaga)	ICP-MS	Abu-Reidah et al., <i>Antioxidants</i> 2021	nih Low for whole chaga. mdpi Fe not detected in those extracts
Vitamins	Vitamin E 50–175 μ g/100 g chaga in extracts ; B vitamins detected	Extracts	UHPLC-HRAM-MS	Abu-Reidah et al. 2021	Low. The authors state vitamins were "reported for the first time in Chaga"
Vitamin D /	No measured value for wild sclerotium found. Ergosterol	Mycelium cultures	RP-HPLC-DAD	<i>Molecules</i>	doi Not transferable to

ergosterol	99.5–223.5 mg/100 g DM in mycelial cultures only	(Polish isolates)		2023	wild chaga
Triterpenoids	Total triterpenes 6.4–14.9 mg/g; doi inotodiol QC criterion ≥ 1.165 mg/g	Sclerotium	Colorimetric; HPLC	FEMS Microbiol Lett 2023; <i>J Anal Sci Technol</i> 2020	Moderate
Total phenolics	0.545–1.293 g GAE/100 g (range unconfirmed against the primary drying study, Lee et al. 2007)	Dried powder	Folin–Ciocalteu	Secondary snippet attributed to a drying-methods study	Low. Folin assay is non-specific
Oxalate (total)	2.8–14.2 g/100 g	reishiandrosesbotanicals nutritionpro Three commercial powders (Korea/Japan)	Japan Food Research Laboratories assay	Lee et al. 2020	Moderate: independent lab measurements, but only three products
Oxalate (soluble, hot-water extract)	~171–534 mg/100 g dry chaga	Russian, Finnish, Thai samples	namyco HPLC on aqueous extracts	Glamočlija et al. 2015 (as recalculated by NAMA)	Moderate

How to read this table: Chaga has no validated food-composition database entry (we found none in government composition databases). Most macronutrient figures trace back to one secondary-reported analysis. The defensible conclusion is not a precise number but a profile: low protein, low fat, high ash, and overwhelmingly non-digestible fibre and lignin.

Energy estimate (explicit assumptions): Using the Chen values, available carbohydrate by difference is $100 - (3.5 \text{ moisture} + 2.4 \text{ protein} + 1.7 \text{ fat} + 10.4 \text{ ash} + 67.5 \text{ crude fibre}) \approx 14.5$ g/100 g. Applying 4/4/9 kcal/g gives about 83 kcal/100 g. Lignin is non-fermentable, so fibre adds little energy. A realistic range is about 80–100 kcal/100 g, giving roughly 2 kcal per 2 g serving. Hot-water tea is close to zero calories.

3. Whole chaga vs. tea vs. powder vs. extracts

Form	What you actually consume	Key quantitative facts	Interpretation
Whole			

dried chaga (chunks)	Not eaten; only a brewing substrate	Composition as in the table above	Describes the raw material, not the drink
Hot-water tea / decoction	The water-soluble fraction only	Classic hot-water extraction (80 °C, 1.5 h, 1:40) yields only 2.12–2.53% polysaccharide. Prolonged extraction (85 °C, 4.77 h, 1:43) reached 16.86% water-soluble crude polysaccharide (Lu et al. 2021)	semanticscholar Most fibre/lignin stays in the spent chunk. Polysaccharides, some phenolics, melanin-type pigments, potassium and soluble oxalate transfer. Triterpenoids transfer poorly
Ground powder eaten directly (in smoothies, capsules)	Everything, including insoluble oxalate and lignin	Oxalate 2.8–14.2 g/100 g in tested powders	Highest oxalate exposure; associated with all kidney-injury cases
Hot-water dry extract	Concentrated water-solubles	Must state extraction ratio (e.g., 10:1) and whether claims refer to starting material or finished extract	Health Canada allows the immunomodulating-polysaccharide claim only for water-only extracts
Ethanol tincture / "dual extract"	Alcohol-soluble triterpenoids (inotodiol, betulinic acid) ± water-solubles azarius functionalmushrooms	Health Canada: ethanolic preparations "are not permitted" for polysaccharide claims "due to poor alcohol solubility of immunomodulatory polysaccharides" hc-sc	A different product with a different chemistry
Mycelium-on-grain	Mostly fermented cereal	33–68% α-glucan/starch; 1.0–6.9% β-glucans researchgate researchgate	Not equivalent to chaga sclerotium

Brewing conditions matter. Extraction pH and temperature strongly change which minerals, phenolics and vitamins appear in the liquid. [mdpi](#) [nih](#) In the Newfoundland study, acidic water at 60 °C extracted the most arsenic, manganese and potassium. [mdpi](#) Alkaline water at 100 °C extracted the most phenolics. [mdpi](#) [nih](#) Home tea recipes vary from 60 °C to simmering, and from 15 minutes to several hours. [earthfoodandfire +2](#) That variation alone makes any single "chaga tea nutrition" figure unreliable.

4. Serving-level calculations

Assumptions:

1. Whole-powder values use the composition table above.
2. Tea values use only measured hot-water extraction data, not the assumption that everything transfers.
3. Reference intakes: Mg 420 mg/day (adult male RDA), K 3,400 mg/day (adult male AI), Mn 2.3 mg/day (adult male AI).

Quantity	2 g dried	5 g dried	10 g dried	Basis
Energy (powder eaten)	~2 kcal	~4–5 kcal	~8–10 kcal	Calculated estimate

Protein (powder eaten)	~0.05 g	~0.12 g	~0.24 g	2.4 g/100 g
Fibre (powder eaten)	~1.35 g crude fibre	~3.4 g	~6.8 g	67.5 g/100 g; mostly lignin/insoluble
Magnesium (powder eaten)	~13 mg (3% RDA)	~32 mg (8%)	~64 mg (15%)	0.64% (single secondary source)
Potassium (powder eaten)	~100 mg (3% AI)	~250 mg (7%)	~500 mg (15%)	~5% assumption; uncertain
Manganese (powder eaten)	~0.4 mg (17% AI)	~1 mg (43%)	~2 mg (87%)	0.02% (single secondary source)
β -glucans (powder eaten)	114–238 mg	285–595 mg	570–1,190 mg	5.7–11.9%
β -glucans (tea)	Not reliably quantified; plausibly tens of mg	—	—	Polysaccharide extraction yield 2.1–2.5% under classic conditions
Total oxalate (powder eaten)	56–284 mg	140–710 mg	280–1,420 mg	2.8–14.2 g/100 g
Soluble oxalate (tea)	~3–16 mg	~9–40 mg	~17–80 mg	171–534 mg/100 g (Glamočlija); 800 mg/100 g (Birch Boys in-house, 80 °C/30 min)

What this means:

- **Macronutrients.** These are nutritionally negligible at any realistic serving.
- **Minerals.** If the secondary figures for manganese and magnesium are right, eating 5–10 g of powder could supply a non-trivial share of manganese. But that same serving delivers hundreds of milligrams of oxalate, which binds minerals and limits their absorption. Tea transfers an unknown fraction. Nobody should rely on chaga as a mineral source.
- **Oxalate.** For comparison, a half-cup of cooked spinach contains about 750 mg oxalate, and 1 tsp of black tea leaves brewed 4 minutes contains about 72 mg. [Wikipedia](#) Ordinary chaga tea at 2–5 g appears to fall in the black-tea range. Eating 10 g of powder daily, as in one kidney-injury case, can rival a daily serving of spinach every day. [mskcc](#)
- **The gap between tea and powder figures.** There is a roughly 10–30× difference between total oxalate in powder and soluble oxalate in hot-water extracts. Possible reasons: (a) part of chaga's oxalate is insoluble calcium oxalate, (b) the methods and samples differ, and (c) the 14.2% sample may be an outlier. The Birch Boys figure is unpublished company data. [birchboys](#) Treat the tea estimates as provisional.

5. Health claims: evidence grades

Grading scale:

- **A** = consistent randomized controlled trials (RCTs) with clinical outcomes
- **B** = at least one adequate controlled human trial

- **C** = uncontrolled human data or ex vivo human-cell studies
- **D** = in vitro/animal only
- **F** = contradicted or no evidence

Claim	Best evidence	Grade	Verdict
Antioxidant	Strong in vitro radical scavenging. Aqueous extract cut H ₂ O ₂ -induced DNA fragmentation in human lymphocytes by over 40% <i>in vitro</i> (BioFactors 2004). nih advancedmycotech No human trial of oxidative-stress biomarkers with clinical outcomes	C–D	Real chemical activity. Health Canada permits a "source of antioxidants" claim, but that is not evidence of disease prevention hc-sc
Immune support	Polysaccharides modulate macrophages/NK cells in vitro and in rodents. One secondary blog cites a 2016 36-person human study, which we could not verify in the primary literature. kasivit A crossover trial with a chaga arm is registered (NCT07127705) with no published results found clinicaltrials	D (C at best)	Not established. Health Canada's "immunomodulating polysaccharides" claim is a monograph-based permitted wording, not proof of clinical immune benefit
Anti-inflammatory	Extracts reduce IL-6/TNF- α in LPS-stimulated macrophages and carrageenan edema in mice. esmed advancedmycotech Doses are mg/kg of extract, not tea	D	Mechanistic only
Blood glucose	Rodent studies (e.g., db/db mice, polysaccharide and methanol extracts) show lower glucose and better insulin sensitivity. nih MSKCC: additive glucose-lowering in vitro, "clinical significance is yet unknown" researchgate mskcc	D	No clinical evidence. Relevant mainly as an interaction risk
Cholesterol / cardiovascular	Lower TC/TG/LDL in hyperlipidemic animals. researchgate nih One anecdote of LDL falling from ~250 to 95 (NAMA newsletter) is uncontrolled	namyco D	Unsupported in humans
Anticancer	Hundreds of cell-line and mouse studies, including organoids and triterpenoid DHFR inhibition. No controlled clinical trial. nih +2 Soviet-era Befungin series (psoriasis n=50; peptic ulcer n=58) were "not randomized, controlled, or blinded" namyco	D (C for unrelated indications)	Not supported as treatment or prevention. Must never replace oncology care
Gut health	Mouse microbiome studies with ethanol or polysaccharide extracts in high-fat-diet and diabetic models	nih nih D	No human data at realistic doses
General nutrition	Proximate data	—	Not a meaningful nutrient source

The MSKCC/ASCO Post assessment matches this table. Chaga is "marketed for ... antioxidant and immunostimulatory effects, mainly supported by in vitro and in vivo studies. However, clinical trials are needed to confirm such effects." [ascopost](#)

6. Safety assessment

Oxalate nephropathy (established harm, dose-related).

Case	Patient	Exposure	Outcome
Kikuchi et al., <i>Clin Nephrol</i> 2014 (Japan)	72-year-old woman with liver cancer	4–5 teaspoons of chaga powder daily for 6 months	ascopost Oxalate crystals in tubules and urine; irreversible kidney failure requiring dialysis
Lee et al., <i>J Korean Med Sci</i> 2020	49-year-old man	Chaga powder for years for atopic dermatitis	End-stage renal disease. His remaining powder measured 14.2 g oxalate/100 g; two other brands measured 2.8 and 11.2 g/100 g
Kwon et al., <i>Medicine</i> 2022 (Korea)	69-year-old man	10–15 g/day of powder plus 500 mg/day vitamin C (an oxalate precursor) for 3 months	mskcc Acute oxalate nephropathy with minimal-change disease; recovered with hemodialysis and high-dose steroids
BC Drug and Poison Information Centre (via BCCDC 2018)	Five reports since 2014	Commercially sourced chaga tea	Hepatitis with renal failure (with alder bark), hepatitis, bradycardia/syncope. Causality "circumstantial"

Common features of the biopsy-proven cases: daily **ingestion of powder** (not just tea), for **months to years**, in older adults, sometimes with co-factors (cancer, vitamin C). High-risk groups include people with kidney disease, a history of calcium-oxalate stones, fat malabsorption or bowel disease (which increase oxalate absorption), and high vitamin C supplement use. [kasivit](#)

Medication interactions — demonstrated vs. theoretical.

- **Anticoagulants/antiplatelets (warfarin, DOACs, aspirin, clopidogrel): theoretical.** Chaga extract inhibited platelet aggregation in a murine model. MSKCC states the "clinical relevance ... is not known." [mskcc](#) There is one uncontrolled anecdote of post-surgical hematuria (NAMA). [namyco](#) The prudent step is to stop chaga about 2 weeks before surgery, as NetCE advises. [netce](#)
- **Glucose-lowering drugs (insulin, sulfonylureas, metformin): theoretical.** The evidence is in vitro additive effects and animal hypoglycemia. [netce](#) [mskcc](#) Diabetics who add chaga should monitor glucose more often.
- **Immunosuppressants: theoretical.** This rests on the immunostimulatory mechanism only. [antioxi-supplements](#) [advancedmycotech](#)
- **No human pharmacokinetic interaction study exists for any drug.**

Contaminants.

- **Arsenic:** In the Newfoundland extract study, arsenic was the only heavy metal detected (0.81–1.63 µg/g in extracts). Cd and Pb were not detected. Levels were reported as well below tolerable limits. [nih](#) [mdpi](#)
- **Trace elements:** The Russian elemental study found that toxic elements did not exceed maximum permissible levels. Several (Ag, Br, Rb) were enriched relative to natural averages, especially in the outer layer. [asu](#)
- **Wild harvest:** Wild fungi near roads, industry or urban areas can accumulate Pb and Cd. Finnish data on 40+ wild fungal species showed Pb up to 78 mg/kg and Cd up to 101 mg/kg dry matter in some species, highest in urban areas. [osti](#)

- **Storage:** One BC poisoning case involved "moldy, old, improperly stored Chaga." namyco
- **Not found:** pesticide or mycotoxin surveys specific to chaga.

Bioavailability. Detecting a compound in the conk does not mean it is absorbed:

- Insoluble lignin and melanin complexes pass through largely unchanged.
- Large β -glucans are not absorbed intact; they act, if at all, via gut-immune sampling.
- Triterpenoids are poorly water-soluble and barely enter tea. azarius
- Minerals co-occur with oxalate, which reduces their absorption.
- No human pharmacokinetic data exist for inotodiol, betulinic acid or chaga polyphenols after oral intake of realistic servings.

Product verification checklist:

1. Latin name *Inonotus obliquus* and the part used (sclerotium vs. mycelium).
2. Absence of grain substrate, or disclosure of it.
3. β -glucan measured by Megazyme K-YBGL, not "polysaccharides" by UV, which counts starch. nammex
valeherb
4. Extraction solvent and ratio.
5. Batch certificate of analysis for heavy metals (Pb, Cd, As, Hg) and microbiology. advancedmycotech
worldmushroomsociety
6. **Measured oxalate content.**
7. A Health Canada NPN.

7. Canadian regulatory status (relevant to Moncton, NB)

- **NHP route.** Health Canada's *Mushrooms* NHP monograph (version dated October 25, 2024) lists *Inonotus obliquus* (Chaga) as a dry medicinal ingredient. hc-sc hc-sc For every preparation type (dry powder, standardized powder, aqueous extract, ethanolic extract), the dose may "not exceed 3.6 g of dried cultured mycelium/fruiting body/mycelium per day." hc-sc bccdc
- **Permitted claims.** Only "Source of antioxidants" and, for non-ethanolic preparations, "Source of fungal polysaccharides with immunomodulating properties." bccdc Unlike reishi, shiitake and maitake, chaga carries **no** permitted "supports the immune system" herbal-medicine claim in that monograph. The monograph excludes food dosage forms. hc-sc
- **Food route.** According to the BCCDC risk assessment (2018), Health Canada's Food Directorate confirmed that chaga "is considered a novel food." On that basis, chaga teas or kombucha sold as foods without health claims would need a pre-market novel-food assessment. bccdc This determination dates from 2018. Vendors should confirm current status with Health Canada.
- **Wild harvest.** Wild-mushroom harvesting is unregulated in Canada. Sellers remain liable under section 4 of the *Food and Drugs Act* for selling harmful, adulterated or misidentified product. bccdc
- **No official Health Canada safety advisory specific to chaga** was found in this research. The BCCDC document and BC poison-centre reports are the main Canadian public-health sources.

Recommendations

For MarieLandrySpyShop.com content and any product listings:

1. Do **not** publish "Nutrition Facts"-style claims that chaga is "rich in" protein, vitamins, vitamin D or minerals. The evidence does not support it.
2. Describe chaga as a **source of polysaccharides/ β -glucans and antioxidant phenolics**, consistent with

Health Canada-permitted wording. Avoid disease claims (cancer, diabetes, cholesterol, arthritis). These are both unsupported and non-compliant in Canada.

3. Include an oxalate warning, in plain language. Suggested content: Avoid if you have kidney disease or kidney stones. Do not eat raw chaga powder daily. Keep intake to no more than 3.6 g of dried chaga per day. Consult a clinician if you take blood thinners or diabetes medication, or before surgery.
4. If selling, prefer products with an NPN, a stated extraction method, Megazyme β -glucan results, heavy-metal certificates, and ideally measured oxalate.

For consumers (including local foragers):

- Brewing tea from 2–5 g of chunks, rather than eating powder, is the lower-exposure way to use chaga.
- Harvest only from living birch away from roads and industry. Get positive identification. Dry the material thoroughly and store it dry to avoid mould.

Caveats

- **Thin primary data.** Whole-sclerotium proximate, mineral, amino-acid, fatty-acid and vitamin data are sparse, mostly secondary (Shashkina 2006 review; Chen via Lu 2021), and sometimes internally inconsistent (e.g., potassium). A full Université de Moncton-linked analysis of New Brunswick chaga across four seasons exists (Wontcheu Fotso et al., *Nutraceuticals* 2023). It reports high carbon, low nitrogen and potassium-rich extracts ("five times more than bananas"), [scholaris](#) [mdpi](#) but its full numerical tables could not be retrieved for this report.
- **Not found:** a measured amino-acid profile, a fatty-acid profile, a vitamin D/ergosterol value for wild sclerotium, or a government food-composition entry.
- **Oxalate-in-tea figures** rely on one peer-reviewed study (three samples) plus one company's unpublished in-house test.
- **Unverified human study.** The "2016 36-participant" immune study cited by retailers could not be confirmed in primary literature and is treated as unverified.
- **No reference list.** Per the publication format, sources are named inline (authors, year, journal) to keep claims traceable, rather than listed at the end.
- **Search coverage.** Research was conducted via live web search on October 10, 2026. Paywalled full texts (e.g., Shashkina 2006, Rhee 2008, Kikuchi 2014) were assessed through abstracts and citing documents.

Final Verdict

Chaga should **not** be considered a meaningful nutritional food. At realistic servings it supplies negligible energy, protein and fat, and unquantified, poorly bioavailable minerals. It **is** a genuine source of specific bioactive compounds, β -glucan-containing polysaccharides being the best characterized, with triterpenoids and phenolics varying by host tree, conk layer and extraction solvent. In practice it is **a supplement with incompletely established clinical benefits**: its pharmacology is interesting, its human efficacy is unproven, and it carries a documented, dose-dependent kidney risk from oxalate. The three distinctions in the brief hold throughout. Detecting a compound is not the same as delivering nutrition. Lab activity is not clinical efficacy. A concentrated extract, or a spoonful of raw powder eaten daily, is not the same as a cup of chaga tea.

