



Medicinal Potential of the Certified Organic Nutritional Hemp Powder by Nesa's Hemp



Prepared by: **Nesa's Hemp**

Date: **3/30/2026**

Reviewed by: **Alexandra Arnett, M.S., M.A.**

Table of Contents

Executive Summary2

Introduction2

 The Problem We’re Solving with Nesa’s FSN Powder with Vitamin B172

Product Overview3

 What is Nesa’s Full-Spectrum Nutrition Powder with Vitamin B17?3

 What makes Nesa’s FSN Powder with Vitamin B17 unique?3

 The Science Behind the Ingredients..... 4

 Why It Works Together6

 Nutritional value of Nesa’s FSN Powder6

 How to Use.....6

Use Cases & Benefits.....7

Regulatory Compliance 8

Conclusion 9

References10

Executive Summary

The modern wellness landscape is increasingly moving toward clean, bioavailable, and plant-based nutrition. As a result, consumers often seek transparent brands and products that effectively support the body's natural systems without relying on synthetic additives, artificial colorants, or harsh chemical extraction processes. Nesa's Full Spectrum Nutrition (FSN) Powder was created to meet this consumer demand by offering a raw, whole-plant formula made with six potent seeds and flowers: hemp, pumpkin, sunflower, apricot, and black seed. Processed through a proprietary cold-extraction method, our product preserves vital, delicate nutrients, including cannabinoids like CBDA, in their most bioavailable form. This white paper reviews the scientific literature supporting these ingredients and provides a detailed nutritional profile of Nesa's FSN Powder.

Introduction

Over the past decade, the wellness and dietary supplement industry has undergone a significant shift. This change was amplified by the COVID-19 pandemic, which revealed the challenges and weaknesses in the healthcare system, prompting more people to turn to plant-based wellness options.

However, recent studies have highlighted the major quality control crisis within the mainstream supplement market, including CBD products.^{1,2} In a 2022 study, researchers found that 18% of over-the-counter CBD products were overlabeled, while 58% were underlabeled.³ Concurrently, with chronic health conditions affecting an estimated 76.4% of Americans⁴, there is a growing consensus that highly processed, synthetic, and isolated compounds frequently fail to deliver the systemic nutritional support that is necessary for the body's optimal physiological function.

Nesa's Full-Spectrum Nutrition (FSN) Powder was developed in direct response to these industry shortcomings. Our powder is formulated from a precise, certified organic blend of six potent seeds and flowers. The product prioritizes whole-plant over synthetic isolation. Processed without solvents or high heat, our FSN powder delivers intact, highly bioavailable nutrients, proving a rigorous standard of clean nutrition.

The Problem We're Solving with Nesa's FSN Powder with Vitamin B17

While the retail shelves are full of health products, few deliver active, bioavailable nutrients that respect the complexity behind the plant's original chemical makeup. Nesa's FSN Powder was created to solve three primary systematic failures in modern nutritional supplementation:

1. **Overprocessed Nutrition:** Many supplements are produced using heat, solvents, or chemical extractions, which can destroy sensitive nutrients and plant compounds. These harsh extraction or formulation methods often leave products contaminated with various byproducts, making them difficult for the body to absorb, if at all.
2. **Synthetic and Isolated Ingredients:** Mainstream health products often contain synthetic vitamins or isolated compounds that miss the cofactors necessary for optimal absorption and synergy. In nature, nutrients work together, but most products ignore this.

¹ Jagim AR, Harty PS, Erickson JL, Tinsley GM, Garner D, Galpin AJ. Prevalence of adulteration in dietary supplements and recommendations for safe supplement practices in sport. *Front Sports Act Living*. 2023;5:1239121. Published 2023 Sep 29. doi:10.3389/fspor.2023.1239121

² Navarro V, Avula B, Khan I, et al. The Contents of Herbal and Dietary Supplements Implicated in Liver Injury in the United States Are Frequently Mislabeled. *Hepatol Commun*. 2019;3(6):792-794. Published 2019 Apr 3. doi:10.1002/hep4.1346

³ Spindle TR, Sholler DJ, Cone EJ, et al. Cannabinoid Content and Label Accuracy of Hemp-Derived Topical Products Available Online and at National Retail Stores. *JAMA Network Open*. 2022;5(7):e2223019. doi:https://doi.org/10.1001/jamanetworkopen.2022.23019

⁴ Watson KB, Wiltz JL, Nhim K, Kaufmann RB, Thomas CW, Greenlund KJ. Trends in Multiple Chronic Conditions Among US Adults, By Life Stage, Behavioral Risk Factor Surveillance System, 2013–2023. *Preventing Chronic Disease*. 2025;22. doi:https://doi.org/10.5888/pcd22.240539

3. **Toxic Additives and Contaminants:** Artificial dyes, fillers, preservatives, and heavy metals are still found in countless products marketed as “natural” or “clean.” The [FDA’s crackdowns](#) are only scratching the surface of how broken the system has become.

Meanwhile, people are more health-conscious than ever. They’re seeking anti-inflammatory, immune-supporting, and gut-friendly solutions, but end up wasting money on products that don’t deliver.

And perhaps most importantly: very few products address the body’s true nutritional needs while respecting the plant’s original design. We’ve been taught to believe that more science equals better results. But sometimes, real power lies in preserving what nature perfected.

This is the gap Nesa’s FSN Powder was built to fill: real, complete, plant-based nutrition that the body can actually use without compromise.

Product Overview

What is Nesa’s Full-Spectrum Nutrition Powder with Vitamin B17?

Made with Vitamin B17, Nesa’s FSN Powder is an organic, nutrient-dense superfood blend. Specially crafted from six powerful plant ingredients for their natural, bioavailable nutrients and healing potential, our FSN powder contains hemp seeds, hemp flower, black seeds, apricot seeds, pumpkin seeds, and sunflower seeds.

This product stands for more than just nutrition; it represents a return to nature’s original wisdom. For centuries, humanity thrived on whole, natural foods grown without chemicals, modification, or synthetic interference. We lived longer, recovered faster, and depended on the Earth’s pharmacy (plants) for both nourishment and healing. Long before pharmaceutical labs and artificial supplements, it was the leaf, the seed, the root, and the flower that supported human health. Plants were, and still are, our oldest allies.

But with industrialization came a flood of synthetic products, processed foods, and genetically modified ingredients that stripped our plates of nutrition and replaced it with convenience. Chronic illness rose, life spans shortened, and the connection between food and healing was severed.

Nesa’s FSN Powder is a call to reconnect with nature. It celebrates the longstanding bond between humans and plants, a relationship built on trust, harmony, and respect. This blend isn’t just a supplement; it’s a statement. A reminder that true health comes from real food, and the answers we seek have always been rooted in the soil beneath us.

What makes Nesa’s FSN Powder with Vitamin B17 unique?

1. A Synergistic Blend of Nature’s Finest

Our full-spectrum nutrition powder contains six organic ingredients: hemp seed, hemp flower, black seed, apricot seed, pumpkin seed, and sunflower seed. Each ingredient was chosen for its unique nutritional benefits, creating a balanced blend that promotes overall health.

2. Preserving Nature’s Integrity

Unlike supplements that depend on heat or chemical processes, Nesa’s Hemp uses a proprietary cold extraction method. Our technique preserves the delicate nutrients in the seeds and the hemp plant’s natural molecular structure, leading to a product that the body can easily recognize and use.

3. Beyond Organic Standards

Our brand, Nesa’s Hemp, intends to set a new benchmark for purity and sustainability within the wellness industry:

- **Certified Organic Ingredients:** All our ingredients come from farms that focus on soil health and ecological balance and are certified organic.
- **No Synthetic Additives:** We prioritize nature and make sure our products contain no artificial colors, preservatives, GMOs, or harmful byproducts.
- **GMP-Certified Production:** Manufactured in facilities that follow Good Manufacturing Practices, ensuring quality and safety.

4. Comprehensive Health Benefits

Nesa's FSN Powder is designed to support multiple facets of health, including;

- **Immune System:** Enhances immune response and supports cellular defense mechanisms.
- **Cardiovascular Health:** Promotes heart health through essential fatty acids and antioxidants.
- **Cognitive Function:** Supports brain health and mental clarity.
- **Digestive Health:** Provides fiber and nutrients that aid in digestion and gut health.
- **Inflammation Reduction:** Contains compounds known to reduce inflammation throughout the body.

Regulatory Disclaimer: *The following section discusses peer-reviewed scientific research regarding the individual raw seeds and flowers used in this formula. These studies highlight the biochemical potential of these isolated plant compounds. However, this research does not represent clinical trials on Nesa's FSN Powder itself. This product is a dietary supplement and is not intended to diagnose, treat, cure, or prevent any disease.*

The Science Behind the Ingredients

Hemp Flower & Hemp Seed

Rich in essential fatty acids (omega-3 and omega-6) and nutrients such as magnesium and zinc, hemp seeds are extremely nutritious and are considered to be a complete plant protein.⁵

Hemp flower contains an array of compounds, such as cannabinoids, terpenes, flavonoids, and more. The flowering hemp plant contains high levels of the acidic cannabinoid, CBDa, which is the precursor to CBD before decarboxylation.⁶ CBDa has shown more potent anti-inflammatory, anti-nausea, and neuroprotective effects in emerging studies than CBD.^{7,8} It also works with the body's endocannabinoid system to help regulate immune response, mood, pain perception, and cellular communication.⁶

It also exhibits selective inhibition of the COX-2 enzyme, a key player in inflammation, suggesting that CBDa may provide more targeted, better-tolerated anti-inflammatory effects compared to CBD.⁹ In terms of bioavailability, preclinical data on canines indicate that CBDa is absorbed more efficiently than CBD.¹⁰ Additionally, CBDa has shown promise in inhibiting the migration of aggressive breast cancer

⁵ Tănase Apetroaei V, Pricop EM, Istrati DI, Vizireanu C. Hemp Seeds (*Cannabis sativa* L.) as a Valuable Source of Natural Ingredients for Functional Foods—A Review. *Molecules*. 2024; 29(9):2097. <https://doi.org/10.3390/molecules29092097>

⁶ Formato M, Crescente G, Scognamiglio M, et al. (–)-Cannabidiolic Acid, a Still Overlooked Bioactive Compound: An Introductory Review and Preliminary Research. *Molecules*. 2020;25(11):2638. [doi:https://doi.org/10.3390/molecules25112638](https://doi.org/10.3390/molecules25112638)

⁷ Rock EM, Limebeer CL, Parker LA. Effect of cannabidiolic acid and Δ9-tetrahydrocannabinol on carrageenan-induced hyperalgesia and edema in a rodent model of inflammatory pain. *Psychopharmacology*. 2018;235(11):3259-3271. [doi:https://doi.org/10.1007/s00213-018-5034-1](https://doi.org/10.1007/s00213-018-5034-1)

⁸ Kamsrijai U, Charoensup R, Jaidee W, Hawiset T, Thaweethee-Sukjai B, Praman S. Cannabidiol/cannabidiolic acid-rich hemp (*Cannabis sativa* L.) extract attenuates cognitive impairments and glial activations in rats exposed to chronic stress. *Journal of Ethnopharmacology*. 2025;338:119113. [doi:https://doi.org/10.1016/j.jep.2024.119113](https://doi.org/10.1016/j.jep.2024.119113)

⁹ Takeda S, Misawa K, Yamamoto I, Watanabe K. Cannabidiolic acid as a selective cyclooxygenase-2 inhibitory component in cannabis. *Drug Metabolism and Disposition: The Biological Fate of Chemicals*. 2008;36(9):1917-1921. [doi:https://doi.org/10.1124/dmd.108.020909](https://doi.org/10.1124/dmd.108.020909)

¹⁰ Wakshlag JJ, Schwark WS, Deabold KA, et al. Pharmacokinetics of Cannabidiol, Cannabidiolic Acid, Δ9-Tetrahydrocannabinol, Tetrahydrocannabinolic Acid and Related Metabolites in Canine Serum After Dosing With Three

cells through mechanisms involving the COX-2 and c-Fos pathways.^{11,12}

Black Seed (*Nigella sativa*)

Known historically as the "seed of blessing," black cumin seed is a rich source of thymoquinone.¹³ Thymoquinone has been studied for its potent antioxidant and anti-inflammatory properties. It acts as a powerful scavenger of free radicals. It supports the body's natural defense enzymes, such as superoxide dismutase (SOD) and glutathione peroxidase, which help to mitigate cellular oxidative stress. By modulating pro-inflammatory cytokines, including TNF- α and IL-1 β , thymoquinone may also support healthy immune and inflammatory responses. Additionally, thymoquinone enhances immune function by modulating both innate and adaptive responses and shows neuroprotective effects in models of Alzheimer's and Parkinson's disease by reducing neuroinflammation and oxidative brain damage.¹⁴

Thymoquinone has also demonstrated anticancer potential by inducing apoptosis, inhibiting angiogenesis and metastasis, and modulating key pathways such as p53, Bax/Bcl-2, and PI3K/Akt across various cancers, including breast, colon, and prostate cancers.¹⁵ It also supports liver health by lowering hepatic enzyme levels and protecting against chemical-induced liver damage, while promoting metabolic balance through improved insulin sensitivity and lipid regulation.¹⁴

Apricot Seed

Apricot seeds naturally contain amygdalin, a compound often referred to as Vitamin B17. Recently, some systematic reviews and preclinical studies have highlighted the potential of amygdalin as a bioactive compound. Amygdalin has been reported to be a potent antioxidant, supporting cellular health and defense mechanisms against oxidative stress.^{16,17}

Apricot seeds are a natural source of Vitamin B17 (amygdalin), a compound that has generated significant controversy but also growing interest in holistic health circles. Preclinical studies suggest that amygdalin may selectively target cancer cells by releasing hydrogen cyanide in the presence of enzymes like beta-glucosidase, which are more abundant in tumor tissues.¹⁸ In contrast, healthy cells remain protected by detoxifying enzymes such as rhodanese. Research also indicates that amygdalin can stimulate immune cell activity, reduce pro-inflammatory cytokines like TNF- α and IL-6, and alleviate pain by modulating inflammation-related pathways. Its antioxidant effects may further support cardiovascular and cellular health by minimizing oxidative stress.¹⁹

Oral Forms of Hemp Extract. *Front Vet Sci*. 2020;7:505. Published 2020 Sep 4. doi:10.3389/fvets.2020.00505

¹¹ Takeda S, Okajima S, Miyoshi H, et al. Cannabidiolic acid, a major cannabinoid in fiber-type cannabis, is an inhibitor of MDA-MB-231 breast cancer cell migration. *Toxicol Lett*. 2012;214(3):314-319. doi:10.1016/j.toxlet.2012.08.029

¹² Takeda S, Himeno T, Kakizoe K, et al. Cannabidiolic acid-mediated selective down-regulation of c-fos in highly aggressive breast cancer MDA-MB-231 cells: possible involvement of its down-regulation in the abrogation of aggressiveness. *J Nat Med*. 2017;71(1):286-291. doi:10.1007/s11418-016-1030-0

¹³ Gholamnezhad Z, Havakhah S, Boskabady MH. Preclinical and clinical effects of *Nigella sativa* and its constituent, thymoquinone: A review. *Journal of Ethnopharmacology*. 2016;190:372-386. doi:https://doi.org/10.1016/j.jep.2016.06.061

¹⁴ Darakhshan S, Bidmeshki Pour A, Hosseinzadeh Colagar A, Sisakhtnezhad S. Thymoquinone and its therapeutic potentials. *Pharmacol Res*. 2015;95-96:138-158. doi:10.1016/j.phrs.2015.03.011

¹⁵ Asaduzzaman Khan M, Tania M, Fu S, Fu J. Thymoquinone, as an anticancer molecule: from basic research to clinical investigation. *Oncotarget*. 2017;8(31):51907-51919. Published 2017 Apr 18. doi:10.18632/oncotarget.17206

¹⁶ Akhone MA, Bains A, Tosif MM, Chawla P, Fogarasi M, Fogarasi S. Apricot Kernel: Bioactivity, Characterization, Applications, and Health Attributes. *Foods*. 2022;11(15):2184. Published 2022 Jul 22. doi:10.3390/foods11152184

¹⁷ Siddiqui SA, Anwar S, Yunusa BM, Nayik GA, Mousavi Khaneghah A. The potential of apricot seed and oil as functional food: Composition, biological properties, health benefits & safety. *Food Bioscience*. 2023;51:102336. doi:https://doi.org/10.1016/j.fbio.2022.102336

¹⁸ Spanoudaki M, Stoumpou S, Papadopoulou SK, et al. Amygdalin as a Promising Anticancer Agent: Molecular Mechanisms and Future Perspectives for the Development of New Nanoformulations for Its Delivery. *Int J Mol Sci*. 2023;24(18):14270. Published 2023 Sep 19. doi:10.3390/ijms241814270

¹⁹ Alwan AM, Rokaya D, Kathayat G, Afshari JT. Onco-immunity and therapeutic application of amygdalin: A review. *J Oral Biol Craniofac Res*. 2023;13(2):155-163. doi:10.1016/j.jobcr.2022.12.010

Pumpkin Seed

Pumpkin seeds (*Cucurbita pepo*) are a nutrient-dense superfood rich in zinc, magnesium, plant-based iron, and L-tryptophan, offering scientifically supported benefits for hormone regulation, mood balance, and prostate health.²⁰ Zinc is essential for testosterone production, immune health, and male fertility, while magnesium facilitates over 300 biochemical reactions, including stress management, muscle relaxation, and sleep quality.^{21, 22} Plant-based iron helps with oxygen transport and energy metabolism, which is especially important for people on plant-based diets. L-tryptophan, a precursor to serotonin and melatonin, has been linked to better mood and improved sleep in clinical studies.²³ Pumpkin seeds also contain high levels of phytosterols, which have been shown to lower LDL cholesterol by inhibiting its absorption in the gut, supporting cardiovascular health.²⁴ Additionally, their antioxidant content, including vitamin E, phenolic acids, and carotenoids, helps reduce inflammation and oxidative stress, providing potentially protective effects against chronic diseases such as arthritis, metabolic syndrome, and certain cancers.²⁵

Sunflower Seed

Sunflower seeds provide Vitamin E, selenium, folate, and healthy fats, making them a valuable ally for cardiovascular and skin health. They may support antioxidant defenses and cellular repair, and complement other seeds with additional protein and mineral density.²⁶

Why It Works Together

By preserving the molecular structure of these ingredients through a proprietary cold extraction method, Nesa's Hemp helps ensure that the cannabinoids remain in their acidic form, nutrients remain bioavailable, and enzymes remain active.

Each ingredient may help to support the effects of others, resulting in clean, multi-system support for immunity, energy, mental clarity, digestion, and inflammation control.

Nutritional value of Nesa's FSN Powder

Each scoop contains 70.7 kcal of energy, 2.9g of protein, and 4.9g of carbohydrates, including 0.1g of sugars and 0.5g of fiber. It also provides 6.1g of total fat, including 0.4g of saturated fat and 0.9g of monounsaturated fat, and is cholesterol-free.

How to Use

Use Nesa's FSN powder as a replacement for your daily multivitamin to energize your day and support your long-term health goals. Simply add two tablespoons each day to your smoothie, juice, yogurt, or favorite recipe. No pills. No isolates. Just full-spectrum, plant-based nutrition *the way nature intended*.

²⁰ Devi M, Prasad R, Sagarika N. A review on health benefits and nutritional composition of pumpkin seeds. *International Journal of Chemical Studies*. 2018;6(3):1154-1157.

²¹ Roohani N, Hurrell R, Kelishadi R, Schulin R. Zinc and its importance for human health: An integrative review. *J Res Med Sci*. 2013;18(2):144-157.

²² Fatima G, Dzipina A, Alhmadi HB, et al. Magnesium Matters: A Comprehensive Review of Its Vital Role in Health and Diseases. *Cureus*. 2024;16(10). doi:<https://doi.org/10.7759/cureus.71392>

²³ Kikuchi AM, Tanabe A, Iwahori Y. A systematic review of the effect of L-tryptophan supplementation on mood and emotional functioning. *J Diet Suppl*. 2021;18(3):316-333. doi:10.1080/19390211.2020.1746725

²⁴ Wang M, Zhang L, Wu X, Zhao Y, Wu L, Lu B. Quantitative determination of free and esterified phytosterol profile in nuts and seeds commonly consumed in China by SPE/GC-MS. *LWT*. 2019;100:355-361. doi:<https://doi.org/10.1016/j.lwt.2018.10.077>

²⁵ Oh J, Hong S, Ko SH, Kim HS. Evaluation of Antioxidant Effects of Pumpkin (*Cucurbita pepo* L.) Seed Extract on Aging- and Menopause-Related Diseases Using Saos-2 Cells and Ovariectomized Rats. *Antioxidants*. 2024;13(2):241. doi:<https://doi.org/10.3390/antiox13020241>

²⁶ Guo S, Ge Y, Na Jom K. A review of phytochemistry, metabolite changes, and medicinal uses of the common sunflower seed and sprouts (*Helianthus annuus* L.). *Chemistry Central Journal*. 2017;11(1). doi:<https://doi.org/10.1186/s13065-017-0328-7>

Use Cases & Benefits

Daily Energy, Focus & Mental Clarity

Potential Use Case: Professionals, students, and anyone struggling with fatigue or brain fog.

How Nesa's FSN powder may assist:

- Rich in complete plant-based proteins and omega-3s to support sustained mental energy.
- Contains magnesium, tryptophan, and Vitamin B complex cofactors to promote neurotransmitter health.
- CBDA and thymoquinone may help regulate stress response and decrease inflammation in the brain.

Recovery & Muscle Support

Potential Use Case: Athletes, fitness enthusiasts, and individuals recovering from injury or illness.

How Nesa's FSN powder may assist:

- Provides bioavailable proteins and essential amino acids for tissue repair.
- Anti-inflammatory compounds (CBDA, flavonoids, terpenes, and thymoquinone) lessen soreness and support quicker recovery.
- Magnesium and zinc boost muscle function and help prevent cramps.

Supports Healthy Inflammatory Responses & Joint Mobility

Potential Use Case: Chronic pain sufferers, autoimmune conditions, and those dealing with joint stiffness or gut inflammation.

How Nesa's FSN powder may assist:

- Cannabinoids like CBDA have been shown to reduce inflammatory markers more potently than CBD.
- Black seed and sunflower seed may provide antioxidant and anti-inflammatory support.
- May help regulate immune response, reducing systemic inflammation without side effects.

Immune Defense & Cellular Protection

Potential Use Case: People with weakened immune systems, or anyone looking to fortify their defenses year-round.

How Nesa's FSN powder may assist:

- Whole-plant compounds support immune modulation and cellular detoxification.
- B17 from apricot seeds may help support the detection and clearance of abnormal cells.
- Cold-processed nutrients remain intact, delivering real bioactivity.

Promotes Microbiome & Digestive Health

Potential Use Case: Individuals with IBS, leaky gut, or poor nutrient absorption.

How Nesa's FSN powder may assist:

- Gentle on digestion, with natural enzymes and fiber to support microbiome health.
- Inflammation-reducing compounds help soothe the intestinal lining.
- Seeds provide prebiotic nutrients that fuel beneficial gut bacteria.

Cardiovascular & Hormonal Support

Potential Use Case: Aging populations, individuals with high cholesterol or high blood pressure, and those managing hormonal imbalances.

How Nesa's FSN powder may assist:

- Hemp, pumpkin, and sunflower seeds contribute heart-healthy fats and sterols.
- Magnesium, zinc, and selenium support hormone regulation and circulation.
- Thymoquinone may help regulate blood glucose and lipid levels.

Supports Long-Term Cellular Wellness

Potential Use Case: Parents, caregivers, and wellness seekers who want to prevent disease rather than just treat it.

How Nesa's FSN powder may assist:

- Supplies the body with nutrient-dense, organic superfoods that fight nutrient gaps.
- Supports liver detox, brain function, and immune resilience with every scoop.
- No synthetic additives, dyes, or preservatives, safe for long-term daily use.

Regulatory Compliance

Certifications and Compliance with Health & Safety Standards

Nesa's FSN Powder with B17 is FDA-compliant, Organic certified, and built to exceed consumer and regulatory expectations.

Key certifications and standards include:

- **USDA Certified Organic:** Every ingredient in Nesa's FSN Powder is sourced from organic-certified farms, guaranteeing no GMOs, synthetic fertilizers, or pesticides.
- **GMP-Certified Facility:** Manufactured in a Good Manufacturing Practices (GMP) facility, ensuring consistency, cleanliness, and quality control in every batch.
- **Third-Party Lab Tested:** Each batch is tested independently for purity, potency, and to ensure it is free of heavy metals, pesticides, and microbial contamination.
- **Kosher Certified:** Made in accordance with strict kosher guidelines, ensuring the product upholds the highest standards of dietary purity and preparation.
- **Solventless Cold Extraction:** This unique process eliminates chemical solvents, keeping full-spectrum nutrients in their raw, bioavailable state.
- **Zero Artificial Additives:** No synthetic dyes, preservatives, or fillers—completely aligned with the FDA's growing focus and recent efforts to limit artificial food dyes and contaminants in health products.

Legal Considerations Surrounding Hemp-Based Products

Nesa's FSN Powder meets all federal and state regulations concerning hemp and cannabinoid levels (see the COA for details).

Key legal compliance highlights:

- **2018 Farm Bill Compliance:** Nesa's FSN Powder comes from industrial hemp with less than 0.3% THC, making it completely legal under U.S. federal law.

- **Non-psychotropic Profile:** The formula contains CBDA (the raw, non-intoxicating precursor to CBD), ensuring therapeutic benefits without any psychotropic effects.
- **International Compliance Potential:** The lack of THC and the use of hemp seed and hemp flower (not marijuana) enable wider export and distribution options, depending on local laws.
- **Transparent Labeling & Claims:** All health claims are backed by peer-reviewed preclinical or clinical research. Nesa's Hemp avoids making unsupported claims, following FTC and FDA regulations for marketing dietary supplements.

Conclusion

The demand for clean, transparent dietary supplements has never been higher. Consumers and health professionals alike are turning away from heavily processed isolates and synthetic additives, seeking out whole-plant nutrition that the body can easily absorb and use.

Nesa's Certified Organic Full-Spectrum Nutrition (FSN) Powder was created to meet this need. Our specially formulated blend combines six carefully selected seeds and flowers—hemp, pumpkin, sunflower, apricot, and black seed—harnessing the plants' natural biochemistry. Using a proprietary, solventless cold-extraction method, Nesa's Hemp guarantees that the delicate cannabinoids, flavonoids, enzymes, and other vital compounds stay intact and highly bioavailable in all our products.

For retailers seeking unique products, investors interested in the future of holistic health, and consumers focusing on clean ingredients, Nesa's Hemp offers a formulation rooted in ethical sourcing, biochemical integrity, and transparent manufacturing. It exemplifies a modern approach to wellness, providing functional, plant-based nutrition without sacrifice.

References

1. Jagim AR, Harty PS, Erickson JL, Tinsley GM, Garner D, Galpin AJ. Prevalence of adulteration in dietary supplements and recommendations for safe supplement practices in sport. *Front Sports Act Living*. 2023;5:1239121. Published 2023 Sep 29. doi:10.3389/fspor.2023.1239121
2. Navarro V, Avula B, Khan I, et al. The Contents of Herbal and Dietary Supplements Implicated in Liver Injury in the United States Are Frequently Mislabeled. *Hepatol Commun*. 2019;3(6):792-794. Published 2019 Apr 3. doi:10.1002/hep4.1346
3. Spindle TR, Sholler DJ, Cone EJ, et al. Cannabinoid Content and Label Accuracy of Hemp-Derived Topical Products Available Online and at National Retail Stores. *JAMA Network Open*. 2022;5(7):e2223019. doi:<https://doi.org/10.1001/jamanetworkopen.2022.23019>
4. Watson KB, Wiltz JL, Nhim K, Kaufmann RB, Thomas CW, Greenlund KJ. Trends in Multiple Chronic Conditions Among US Adults, By Life Stage, Behavioral Risk Factor Surveillance System, 2013–2023. *Preventing Chronic Disease*. 2025;22. doi:<https://doi.org/10.5888/pcd22.240539>
5. Tănase Apetroaei V, Pricop EM, Istrati DI, Vizireanu C. Hemp Seeds (*Cannabis sativa* L.) as a Valuable Source of Natural Ingredients for Functional Foods—A Review. *Molecules*. 2024; 29(9):2097. <https://doi.org/10.3390/molecules29092097>
6. Formato M, Crescente G, Scognamiglio M, et al. (–)-Cannabidiolic Acid, a Still Overlooked Bioactive Compound: An Introductory Review and Preliminary Research. *Molecules*. 2020;25(11):2638. doi:<https://doi.org/10.3390/molecules25112638>
7. Rock EM, Limebeer CL, Parker LA. Effect of cannabidiolic acid and Δ^9 -tetrahydrocannabinol on carrageenan-induced hyperalgesia and edema in a rodent model of inflammatory pain. *Psychopharmacology*. 2018;235(11):3259-3271. doi:<https://doi.org/10.1007/s00213-018-5034-1>
8. Kamsrijai U, Charoensup R, Jaidee W, Hawiset T, Thaweethee-Sukjai B, Praman S. Cannabidiol/cannabidiolic acid-rich hemp (*Cannabis sativa* L.) extract attenuates cognitive impairments and glial activations in rats exposed to chronic stress. *Journal of Ethnopharmacology*. 2025;338:119113. doi:<https://doi.org/10.1016/j.jep.2024.119113>
9. Takeda S, Misawa K, Yamamoto I, Watanabe K. Cannabidiolic acid as a selective cyclooxygenase-2 inhibitory component in cannabis. *Drug Metabolism and Disposition: The Biological Fate of Chemicals*. 2008;36(9):1917-1921. doi:<https://doi.org/10.1124/dmd.108.020909>
10. Wakshlag JJ, Schwark WS, Deabold KA, et al. Pharmacokinetics of Cannabidiol, Cannabidiolic Acid, Δ^9 -Tetrahydrocannabinol, Tetrahydrocannabinolic Acid and Related Metabolites in Canine Serum After Dosing With Three Oral Forms of Hemp Extract. *Front Vet Sci*. 2020;7:505. Published 2020 Sep 4. doi:10.3389/fvets.2020.00505
11. Takeda S, Okajima S, Miyoshi H, et al. Cannabidiolic acid, a major cannabinoid in fiber-type cannabis, is an inhibitor of MDA-MB-231 breast cancer cell migration. *Toxicol Lett*. 2012;214(3):314-319. doi:10.1016/j.toxlet.2012.08.029
12. Takeda S, Himeno T, Kakizoe K, et al. Cannabidiolic acid-mediated selective down-regulation of c-fos in highly aggressive breast cancer MDA-MB-231 cells: possible involvement of its down-regulation in the abrogation of aggressiveness. *J Nat Med*. 2017;71(1):286-291. doi:10.1007/s11418-016-1030-0
13. Gholamnezhad Z, Havakhah S, Boskabady MH. Preclinical and clinical effects of *Nigella sativa* and its constituent, thymoquinone: A review. *Journal of Ethnopharmacology*. 2016;190:372-386. doi:<https://doi.org/10.1016/j.jep.2016.06.061>
14. Darakhshan S, Bidmeshki Pour A, Hosseinzadeh Colagar A, Sisakhtnezhad S. Thymoquinone and its therapeutic potentials. *Pharmacol Res*. 2015;95-96:138-158. doi:10.1016/j.phrs.2015.03.011
15. Asaduzzaman Khan M, Tania M, Fu S, Fu J. Thymoquinone, as an anticancer molecule: from basic research to clinical investigation. *Oncotarget*. 2017;8(31):51907-51919. Published 2017 Apr 18. doi:10.18632/oncotarget.17206
16. Akhone MA, Bains A, Tosif MM, Chawla P, Fogarasi M, Fogarasi S. Apricot Kernel: Bioactivity, Characterization, Applications, and Health Attributes. *Foods*. 2022;11(15):2184. Published 2022 Jul 22. doi:10.3390/foods11152184

17. Siddiqui SA, Anwar S, Yunusa BM, Nayik GA, Mousavi Khaneghah A. The potential of apricot seed and oil as functional food: Composition, biological properties, health benefits & safety. *Food Bioscience*. 2023;51:102336. doi:<https://doi.org/10.1016/j.fbio.2022.102336>
18. Spanoudaki M, Stoumpou S, Papadopoulou SK, et al. Amygdalin as a Promising Anticancer Agent: Molecular Mechanisms and Future Perspectives for the Development of New Nanoformulations for Its Delivery. *Int J Mol Sci*. 2023;24(18):14270. Published 2023 Sep 19. doi:10.3390/ijms241814270
19. Alwan AM, Rokaya D, Kathayat G, Afshari JT. Onco-immunity and therapeutic application of amygdalin: A review. *J Oral Biol Craniofac Res*. 2023;13(2):155-163. doi:10.1016/j.jobcr.2022.12.010
20. Devi M, Prasad R, Sagarika N. A review on health benefits and nutritional composition of pumpkin seeds. *International Journal of Chemical Studies*. 2018;6(3):1154-1157.
21. Roohani N, Hurrell R, Kelishadi R, Schulin R. Zinc and its importance for human health: An integrative review. *J Res Med Sci*. 2013;18(2):144-157.
22. Fatima G, Dzapina A, Alhmadi HB, et al. Magnesium Matters: A Comprehensive Review of Its Vital Role in Health and Diseases. *Cureus*. 2024;16(10). doi:<https://doi.org/10.7759/cureus.71392>
23. Kikuchi AM, Tanabe A, Iwahori Y. A systematic review of the effect of L-tryptophan supplementation on mood and emotional functioning. *J Diet Suppl*. 2021;18(3):316-333. doi:10.1080/19390211.2020.1746725
24. Wang M, Zhang L, Wu X, Zhao Y, Wu L, Lu B. Quantitative determination of free and esterified phytosterol profile in nuts and seeds commonly consumed in China by SPE/GC-MS. *LWT*. 2019;100:355-361. doi:<https://doi.org/10.1016/j.lwt.2018.10.077>
25. Guo S, Ge Y, Na Jom K. A review of phytochemistry, metabolite changes, and medicinal uses of the common sunflower seed and sprouts (*Helianthus annuus* L.). *Chemistry Central Journal*. 2017;11(1). doi:<https://doi.org/10.1186/s13065-017-0328-7>