PROGRAM STANDARD 3.0

GROWERS
PROCESSORS / MANUFACTURERS
BRAND OWNERS
1 INTRODUCTION & OBJECTIVES

1.1 BACKGROUND

_Cannabis sativa_ (hemp) has been valued by cultures around the world for its many and varied uses since time immemorial, including as a part of farming systems, food, medicine, fiber, and for other purposes. In recent years a resurgence of public awareness of the value of and consumer interest in hemp and hemp-derived products has led to increased demand in the marketplace, along with increased field production and product development in countries where its cultivation has been legalized. With the passage of the United States Agricultural Improvement Act of 2018, hemp became legal again for cultivation in the United States, adding to an already widespread resurgence in production and consumption of hemp-based products.

The early stages of this resurgence of hemp have raised exciting opportunities for producers and consumers. A myriad of products has been released into the marketplace, teeming with innovations stemming from the nature and potential of the plant itself and entrepreneurial ingenuity. As an agricultural crop, hemp affords the grower a valuable addition to crop rotation and soil stewardship, and the potential for a new income stream. Even so, significant challenges have arisen along with these opportunities: market volatility in these early stages of rapid sector evolution mean instability in sales contracts and supply chains, and potential economic risks; product claims are many, varied, and sometimes unsubstantiated; product quality is variable; and state laws and governmental regulations are inconsistent across jurisdictions and still in a rapid state of flux.

The U.S. Hemp Authority was launched in 2019 as an initiative to serve this burgeoning sector. As a multi-stakeholder platform, it coalesces a balance of interests into a Standard and Certification Program aimed at demonstrating the willingness and ability of the private sector to be self-regulating and an effective and reliable voice in a public-private partnership with regulatory agencies. This unified approach by the sector affords an assurance to consumers and regulators that products certified under the U.S. Hemp Authority are consistently trustworthy. Furthermore, the ongoing evolution of this Standard serves as a convening for interested parties to develop best practices, leadership, and continuously improve production practices and inform the most practical ways forward for the whole sector.

1.2 PROGRAM SCOPE & OBJECTIVES

The U.S. Hemp Authority Certification Standard encompasses the entire production chain from seed to finished product. Certification is awarded to three categories of operations: Growers, Processor/Manufacturers, and Brand Owners. Compliance with applicable sections of the Standard is required for each of these stages of the supply chain. U.S. Hemp Authority certification can be attained for hemp and hemp products such as raw and dried biomass for direct sale or further processing¹, and the constituents and extracts found in hemp, for food, dietary supplements, personal care products, pet supplements² and products based on hemp fiber. The U.S.

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¹ U.S. Hemp Authority does not yet certify smokable or vaping products due to current regulatory uncertainty/inconsistency, and/or product safety concerns expressed by FDA.
² U.S. Hemp Authority does not certify animal feed, single source nutrition products, or other pet products carrying a nutrition facts panel.

Disclaimer: The U.S. Hemp Authority® is a tax-exempt organization, organized under section 501(c)(6) of the Internal Revenue Code, is legally independent of all other hemp organizations and companies, and is neither a governmental body nor a regulatory agency.
Hemp Authority will not, however, certify products that are promoted to encourage consumers to use them for their intoxicating THC content.

Hemp Growers, Processor/Manufacturers, and Brand Owners operate in a broader market context, and are thereby subject to regulations and practice expectations that are common to all kinds of operations within their respective category of activities. It is therefore not the intention of the U.S. Hemp Authority Standard to explicitly repeat in detail all such common requirements, but rather contains provisions to assure that operators have systems in place to adhere to relevant industry norms. For example, any manufacturer of dietary supplements in the United States is required per 21 CFR 111 to follow current Good Manufacturing Practices (cGMPs); similarly, food manufacturers are expected to follow food safety guidelines as delineated in 21 CFR 117.

With the expectation that operators must employ these baseline or minimum practices simply in order to be in business anyway, this Standard focuses on the specific characteristics and attributes of hemp with respect to production practices, legal compliance, product quality, and labeling. While the importance of these baseline good and necessary production practices cannot be forsaken, it is the hemp-specific features that are not covered by other assurance schemes that provide the most salient added value of the U.S. Hemp Authority Certification Program.

This Standard is organized such that terms and requirements applicable to all operations seeking certification appear first, namely a Glossary and a statement of prohibited practices and inputs. Following these are sections specific to certification of each successive supply chain link category, i.e., requirements for Growers, Processor/Manufacturers, and Brand Owners. The U.S. Hemp Authority Standard, through its Certification Program aims to assure all interested parties that production practices meet legal requirements for quality of hemp and hemp-derived ingredients and products, that ingredients and products are handled to maintain product integrity, and are labeled to represent their contents truthfully and clearly. Certified operators are held accountable for demonstrating compliance with all applicable requirements of the Standard, including providing for adequate worker training and safety, and documentation of practices to verify product quality, authenticity, and traceability.

The Standard is crafted such that requirements are directly verifiable via physical inspection and/or document audit. Certain clauses also are followed by Guidance notes; these are explicitly noted as such and serve as recommendations but are not absolute requirements.

2 GLOSSARY

The following definitions and interpretations apply to these terms when used in this Standard:

**Adulteration** for the purposes of this standard refers to a food, dietary supplement, or personal care product that may be considered adulterated if it (1) contains any poisonous or deleterious substance which may render it injurious to health, or if any valuable constituent has been in whole or in part omitted or abstracted therefrom; or (2) if any substance has been substituted wholly or in part therefor; or (3) if damage or inferiority has been concealed in any manner; (4) if any substance has been added thereto or mixed or packed therewith so as to

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3 Adapted from the Food, Drug, and Cosmetic Act, section 402 (21 USC 342)
increase its bulk or weight, or reduce its quality or strength, or make it appear better or of greater value than it is; or (5) if it has been intentionally subjected to radiation, unless the use of the radiation was in conformity with a regulation or exemption. In the event the substance is not an added substance, such food shall not be considered adulterated if the quantity of such substance in such food does not ordinarily render it injurious to health.

**Batch** means a specific quantity of a hemp product that is uniform, that is intended to meet specifications for identity, purity, strength, and composition, and that is produced during a specified period of time according to a single manufacturing record during the same cycle of manufacture.

**Batch number, or lot number** means any distinctive group of letters, or numbers, or any combination of them, from which the complete history of the processing, packaging, labeling, and/or storage of a batch or lot of hemp product can be determined.

**Bioengineered** has the same definition as found in 7 CFR Part 66, namely a “substance that contains genetic material that has been modified through *in vitro* recombinant deoxyribonucleic acid (rDNA) techniques and for which the modification could not otherwise be obtained through conventional breeding or found in nature.”

**Brand owner** means a company that sells a custom hemp formula product and/or label.

**Broad Spectrum** for the purposes of this standard is a term used on finished product labels to describe a cannabinoid hemp product containing a hemp extract of multiple cannabinoids, but where all THC has been removed to non-detectable levels using a compliant laboratory and fit-for-purpose methods with a limit of quantification of less than 0.01%. In addition, broad spectrum extracts cannot have been formulated from the addition of multiple isolated cannabinoids.

**Cannabinoids** means a group of 22-carbon compounds produced by plants in the genus *Cannabis*, including their analogs and transformation products, in particular 21-carbon compounds resulting from decarboxylation during processing.

**Cannabimimetic phytochemical** means any substance not derived from the genus *Cannabis* with similar pharmacological effects to those of the genus *Cannabis* in that it acts directly or indirectly on cannabinoid receptors in the body.

**Certification body** means the organization assigned to inspect, audit, and otherwise evaluate an operation’s compliance with this Standard.

**Component** means any ingredient, additive, processing aid used in the manufacture of a hemp product including those that may not appear in the finished batch of the dietary supplement.

**Confidence level** means the probability or percentage chance that a result will be reliable.

**Facility** means all or any part of a building or location used for or in connection with manufacturing, processing, packaging, labeling, or storage of hemp products or ingredients.

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4 From 21 CFR 111.3
**Finished Product** means any finished good produced by a US Hemp Authority® certified operation, regardless of its place in the supply chain.

**Full Spectrum** for the purposes of this standard is a term used on finished product labels to describe a cannabinoid or hemp product containing a hemp extract including naturally-occurring THC and other cannabinoids, terpenes and other naturally occurring compounds, which has been processed without intentional complete removal of any compounds, and has a final THC quantification of not greater than 0.3%. In addition, full spectrum extracts cannot have been formulated from the addition of isolated cannabinoids.

**Genetically engineered** means produced from an organism or organisms in which the genetic material has been altered through the application of:

a. Vector-based recombinant deoxyribonucleic acid (DNA) or ribonucleic acid (RNA) techniques; direct introduction of DNA or RNA into cells, protoplasts, or organelles; or other in vitro nucleic acid techniques;

b. Methods of fusing cells or protoplasts beyond the taxonomic family that overcome natural physiological, reproductive barriers; and

does not include techniques used in traditional breeding and selection, such as selective breeding and hybridization.

**Genetically engineered ingredient** means an ingredient in dietary supplements or as an additive to food and beverages that is derived from or produced by a genetically engineered organism regardless of whether the ingredient contains detectable DNA or protein from a genetically engineered organism.

**Genetically modified organism (GMO)** is a term used that often relates to bioengineering and/or genetic engineering. This Standard instead use the terms “bioengineered” and “genetically engineered,” which are terms and definitions used by US and foreign government authorities respectively, and by private sector standards and other organizations that address these issues.

**Good Agricultural Practices (GAP)** are a collection of recommended principles and practices to apply for on-farm production and post-production processes.

**Good Manufacturing Practice (GMP, or cGMP for current Good Manufacturing Practice)** means a system for ensuring that products are consistently produced and controlled according to current quality standards. cGMP for food, animal food, dietary supplements and over-the-counter (OTC) drugs are regulated by the FDA within the Code of Federal Regulations (CFR) (i.e., 21 CFR 117, 21 CFR 507, 21 CFR 111 and 21 CFR 210 respectively). The FDA also has provided voluntary (non-binding) GMPs for cosmetics.

**Growth medium** means soil, or the solid, liquid or semi-solid substance used to support the growth of the plant.

**Hemp** means cultivars of the plant species *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.\(^5\)

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\(^5\) 7 CFR 990
**Hemp Extract** means a mixture of constituents obtained from some or all of the aerial parts of hemp by using a solvent or physical process.

**Hemp product** means any product manufactured or produced with hemp or containing or comprised of hemp or parts of the hemp plant, or hemp extract(s).

**Ingredient** means any substance that is used in the manufacture of a hemp product and that is intended to be present in the finished batch of the hemp product.

**Input** means any material that is used to grow a crop or is an ingredient or processing aid in the manufacture of a processed product.

**Isolate** means a hemp extract that has been processed to intentionally yield a high percentage of a single molecular constituent (such as CBD or another cannabinoid).

**Lot** means a batch, or a specific identified portion of a batch, or, in the case of a hemp product produced by continuous process, a specific identified amount produced in a specified unit of time or quantity in a manner that is uniform and that is intended to meet specifications for identity, purity, strength, and composition.

**Must** is used herein to state a requirement. “Shall” means the same as must.

**Non-retail** means any product that is meant to be further transformed, packaged or labeled before being made available to the final consumer.

**Personal Protective Equipment (PPE)** means protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer’s body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.

**Pest** means any objectionable insect or other animal including but not limited to birds, rodents, flies, mites, and larvae.

**Processing** means making a transformative change to the hemp plant or product following harvest; converting an agricultural commodity into a marketable form.

**Processing aid** means (i) A substance that is added during the processing but is removed in some manner before a product is packaged in its finished form; (ii) a substance that is added during processing, is converted into constituents normally present in the finished product, and does not significantly increase the amount of the constituents naturally found in the finished product; and (iii) a substance that is added for its technical or functional effect in the processing but is present in the finished product at insignificant levels and does not have any technical or functional effect in that finished product.

**Quality** means that the hemp product consistently meets the established specifications for identity, purity, strength, and composition, and limits on contaminants, and has been manufactured, packaged, labeled, and held under conditions to prevent adulteration.
Regulatory Authority having jurisdiction usually means the state, but it could be FDA, FTC, USDA, EPA, tribal government, county or city.

Retail means any product labeled for final consumer use.

Sample means a sufficient amount of material that is statistically representative of the population from which it is taken. A sample may be a particular plant part, including inflorescence (flower), leaf, stalk or seed, or it may be a processed product (oil, extract, powder, etc.).

Sanitize means to adequately treat cleaned equipment, containers, utensils, etc. or any other cleaned contact surface by a process that is effective in destroying vegetative cells of microorganisms of public health significance, and in substantially reducing numbers of other microorganisms, but without adversely affecting the product or its safety for the consumer.

Synthetic cannabinoid means a cannabinoid that is not derived from the genus Cannabis.

Tetrahydrocannabinol (THC) is an intoxicating crystalline compound found in the genus Cannabis. U.S. federal law mandates that hemp plants may only contain trace amounts of THC (not more than 0.3% on a dry weight basis).

3 REQUIREMENTS FOR ALL CERTIFIED OPERATORS

3.1 COMPLIANCE WITH APPLICABLE LAWS

3.1.1 Any operation certified under this Standard must be in compliance with all applicable laws, including holding relevant permits and licenses required by federal, state, tribal, or other jurisdictional authorities as applicable to the location and nature of their business. This also includes appropriate permits for importation and exportation of seed, hemp biomass or processed products.

3.1.2 Operators must demonstrate to the certification body how they stay informed of the legal requirements that apply to their operations, and how they follow such requirements on an ongoing basis.

3.1.3 Operators must keep on file a record of any violations of applicable laws and corrective actions for which they have been cited by relevant regulatory authorities.

3.2 PROHIBITIONS

3.2.1 Only products containing cannabinoids derived from the hemp plant (Cannabis Sativa L.) are eligible for U.S. Hemp Authority Certification. Products with synthetic cannabinoids, biosynthetic cannabinoids, cannabimimetic phytochemicals in lieu of hemp-derived cannabinoids, bioengineered hemp, and/or genetically engineered hemp may not be used in any stage of production.

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6 U.S. Food & Drug Administration.
7 U.S. Federal Trade Commission.
8 U.S. Department of Agriculture.
9 U.S. Environmental Protection Agency.
4 REQUIREMENTS FOR GROWERS

4.1 PRODUCTION PLANS AND RECORDS
All certified Growers must have a plan for production that at least includes the practices and corresponding records noted in this section, to show that the plan being routinely implemented.

Guidance: Growers can expect that their use of Good Agricultural Practices (GAP) will fulfill baseline requirements delineated in this section, but that additional considerations are needed as described below to address the specific characteristics of hemp.


4.1.1 All growers must be duly licensed in accordance with USDA regulations for hemp production, as noted in 7 CFR 99010.

4.1.2 Actual acreage and/or number of hemp plants grown, by variety must be declared to the certification body. Maps of all growing parcels must be kept on file.

Guidance: Farm Service Agency (FSA) crop reporting records may support compliance with this requirement.

4.1.3 Employee qualification and training records relevant to hemp production must be kept updated and on file.

4.1.4 All sources of hemp seed used, by source, variety, and amount, and all related purchases must be recorded and on file.

Guidance: With respect to imported seed, the U.S. Department of Agriculture (USDA) regulates the importation of all seeds for planting to ensure safe agricultural trade. USDA guidelines for the import of hemp seeds and hemp plants can be found at https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/hemp.

4.1.5 All production input materials used, including purchase records, material data sheets and labels must be noted to the certification body. Input use should be specific to the part(s) of the growing operation affected (ie per field, greenhouse, etc.) and include dates and amounts used.

4.1.6 All amounts harvested by field and/or structure (eg greenhouse, indoor grow room, etc.) must be duly recorded and maintained on file.

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10 7 CFR 990 is the USDA Domestic Hemp Production Program outlines provision for the USDA to approve plans submitted by States and Indian Tribes for the domestic production of hemp. It also established a Federal plan for producers in States or territories or Indian Tribes that do not have their own USDA-approved plan.

Disclaimer: The U.S. Hemp Authority® is a tax-exempt organization, organized under section 501(c)(6) of the Internal Revenue Code, is legally independent of all other hemp organizations and companies, and is neither a governmental body nor a regulatory agency.
4.1.7 Copies of all analyses done on seed, soil, crop, and product must be duly recorded and maintained on file.

4.1.7.1 Analyses on harvested crop must at least attest to THC levels being 0.3% or less on a dry weight basis.

4.1.8 All post-harvest handling activities and other treatments of crop, including but not limited to drying, cleaning, cutting, grinding, packing, and storage must be duly recorded and maintained on file.

4.1.9 All amounts sold, by variety, quantity, and customer must be duly recorded and maintained on file. Any amounts otherwise disposed shall also be specified and recorded.

4.1.10 Records must be retained for a minimum of 5 years from the date on which certification is first granted.

4.2 PERSONNEL TRAINING, HYGIENE AND SAFETY

Employees who grow, manufacture, package, or label hemp shall be qualified to do so, and must have the education, training, or experience to perform the assigned functions. Supervisors shall be qualified by education, training, or experience to supervise.

4.2.1 All persons involved in activities related to compliance with this Standard must be trained in the relevant requirements that pertain to their specific role. Training must be updated at least annually and any time otherwise as changes are made to this Standard and/or to the operation itself.

4.2.2 All Grower operations must ensure proper sanitation measures by and for employees. This includes adequate personal hygiene and washing facilities, appropriate clothing and tools to prevent contamination of crop, and guidelines about exclusion from work when personal health poses a risk to other workers or certified product.

4.2.3 All workers must be provided with appropriate training and personal protection equipment (PPE) to assure their safety with respect to use of equipment, contact with the crop (and contamination avoidance of it), and materials used during production, harvest, and/or post-harvest handling.

4.2.4 Applicable laws regarding minimum wage, labor laws, child labor, forced labor, and human rights must be followed.

4.3 SOIL AND WATER MANAGEMENT AND RELATED HEMP PRODUCTION PRACTICES

4.3.1 Growers must control waste, erosion and protect wetlands, waterways and other non-cropped areas from degradation by cropping techniques and/or use of input materials including but not limited to synthetic fertilizers and pesticides, manures and other biological preparations.

4.3.2 Soils must be sampled for laboratory analysis in preparation for certified growing under this Standard. Samples must be taken for heavy metal concentration (at a minimum, for arsenic, cadmium, mercury, and lead), pH, pesticide residues, and soil nutrient profile in order to establish a baseline measurement. Subsequent analyses may be required by the certification body dependent on the Grower’s risk due to materials use and potential for contamination from sources outside the farm.
Guidance:

This Standard does not mandate an additional requirement for THC testing at the Grower’s operation since U.S. regulations (7 CFR 990) already require such sampling and testing by an authorized government agent. USDA publishes the following guidelines about hemp sampling on its website:

4.3.3 Laboratories conducting analyses included in 4.3.2 must be accredited to ISO 17025 for the specific tests involved.

4.3.4 Growers must have a soil nutrient management program that addresses the needs of their hemp crop(s) and optimizes use of fertility input materials. Fertility recommendations may be obtained from any source the Grower deems reputable. In any case, Growers must have their own rationale and method to evaluate the effectiveness of their program.

4.3.5 Growers must employ a system of integrated pest management that guides their use of pesticides (which includes fungicides, herbicides, and any other crop protection materials) so as to mitigate associated environmental damage and contamination of the crop with chemical residues. All materials used must be in accordance with their specific label restrictions for the jurisdiction where they are used, handled and stored in a manner that prevents acute toxic exposure to humans, animals, or the environment.

4.3.6 Sowing and production techniques must be done with equipment that is properly cleaned so as to avoid contamination of the crop by unintended materials.

4.3.7 Harvest must be done in a manner that does not contaminate the crop with chemicals and enables the maximum practical traceability back to the field.

4.4 POST-HARVEST HANDLING, STORAGE AND SHIPPING

4.4.1 Harvested hemp should be cleaned of non-hemp related matter (foreign material) and dried or otherwise maintained under conditions of preservation (eg cold storage) as soon as possible following harvest.

4.4.1.1 Any water used during harvesting, post-harvest handling, or storage of hemp must meet the requirements of the Safe Drinking Water Act.

Guidance: Drying can be done in an oven or dehydrator as necessary, especially in more humid climates. Drying temperatures should be low enough that negative effects on quality are minimized.

4.4.2 Storage of hemp shall be under appropriate conditions of temperature, humidity, and light so that the identity, purity, strength, and other relevant qualities of the hemp are not affected as appropriate for the variety
4.4.3 Transportation of hemp shall be under conditions that will protect the hemp against contamination, adulteration, and/or deterioration of desired quality. Growers must verify and document that transport vehicles are clean and protect certified inputs from damage or contamination.

4.4.4 Packaging must not be coated with or otherwise contain any materials (e.g., fungicides, mold inhibitors, etc.) that may contaminate the hemp.

4.4.5 All package labels should at a minimum state variety, lot number and/or harvest date, and Grower name.

4.4.6 Growers must regularly monitor off-site storage units and document their monitoring activities to assure compliance with these standards.

4.4.7 Exported goods must be accompanied by permits and declarations as required by the operator’s legal jurisdictional authorities, as well as all other applicable requirements of this Standard to ensure the quality and identity of the certified products. Operators are responsible for demonstrating their knowledge of applicable legal requirements and their methods for keeping up to date on them.

5 Requirements for Processing/Manufacturing

5.1 Product Safety

5.1.1 Operators must demonstrate their awareness of product quality, safety and production practices, applicable regulatory requirements, and their methods for adhering to those requirements. Operators must establish and maintain documentation that reflects ongoing adherence to such requirements. The following main objectives must be considered:

- All inputs and finished products must meet established specifications and be free from adulteration or the inadvertent introduction of unintended materials, from receipt of inputs to packaging of finished product.

- All products must be labeled in accordance with the requirements of this Standard and any other applicable federal, state, or tribal laws.

Guidance:

Processor/manufacturers subject to imminent FDA regulation for their respective areas of activity related to hemp products must comply with the Federal Food, Drug and Cosmetic Act -- as amended by the Food Safety and Modernization Act -- as a baseline in addition to the requirements in this Standard.
5.1.2 Facilities producing dietary supplements must demonstrate how they follow current Good Manufacturing Practices (cGMPs) as specified in 21 CFR 111.

5.1.3 Facilities producing human and animal food products must show how they follow applicable food safety measures as specified in 21 CFR 117 and 21 CFR 507, respectively.


Examples of evidence to demonstrate compliance may include but are not limited to a GMP certificate and corresponding report with corrective action plans and/or a recognized FSMA training acknowledgement.

5.1.4 Facilities producing cosmetics and other personal care products must show how they follow applicable measures to ensure products are manufactured consistent with Good Manufacturing Practices (GMP).

**Guidance:** The FDA provides guidance for the industry on Cosmetic Good Manufacturing Practices at this link: [https://www.fda.gov/regulatory-information/search-fda-guidance-documents/draft-guidance-industry-cosmetic-good-manufacturing-practices](https://www.fda.gov/regulatory-information/search-fda-guidance-documents/draft-guidance-industry-cosmetic-good-manufacturing-practices)
5.1.5 Facilities manufacturing over-the-counter (OTC) drug products officially registered in the FDA’s National Drug Code (NDC) Directory must provide their NDC number and demonstrate compliance with relevant Good Manufacturing Practices for drugs pursuant to 21 CFR 210.

Guidance: The FDA provides guidance for the industry on Good Manufacturing Practices for over-the-counter topical drugs, which can be searched for at this link: https://www.fda.gov/regulatory-information/search-fda-guidance-documents.

5.1.6 Facilities manufacturing hemp-derived products not subject to clauses 5.1.2 through 5.1.5 (for example textiles, other hemp fiber-based products, construction materials, other durable goods) must conduct a risk analysis of all activities pertaining to the handling of all inputs used in the manufacturing of such products to be certified under this Standard. They must identify all critical control points to assure that the finished products meet specifications for contaminants and are free of unspecified materials of any kind.

5.2 SANITATION, HYGIENE & PEST CONTROL

5.2.1 All facility spaces, equipment, and tools must be free of physical, chemical, and biological contaminants prior to and during their use in making certified products. Exterior and interior spaces must have sufficient room to enable their ongoing cleaning, monitoring, and maintenance.

5.2.2 Personnel involved with processing and manufacturing of certified products must employ personal hygiene and disease control practices and have adequate facilities to do so.

5.2.3 Personal protection equipment (PPE) must be used as necessary so that workers are protected and do not act as vectors for contaminants, foreign matter, or pathogens.

5.2.4 Water used in processing, as an input or in sanitation, must meet applicable legal potability requirements.

5.2.5 All cleansers, sanitizers, and disinfectants that may affect certified production and products in any way must be specified as to their storage and method of use.

5.2.6 Sanitation Standard Operating Procedures (SSOPs) and/or associated records must document practices as necessary to show compliance with section 5.1.

5.2.7 Routine sanitation measures must be logged as to the materials used, amounts, timing, methods, and persons doing the task. Documentation must include a validation step to affirm the process was effective as intended.

5.2.8 All materials used for pest control at the facility (exterior and interior spaces) must be specified as to their storage, method, and frequency of use. Measures must be taken to assure compliance with clause 5.2.1, as well as avoid contamination of all inputs and packaging materials used in the manufacture of certified products. All such ongoing activities must be documented.

5.3 INPUT SOURCING & SUPPLIER QUALIFICATION

5.3.1 The operation must provide written specifications for each kind of component (hemp and hemp-based materials, other ingredients, and processing aids) it uses to manufacture certified products. Specifications for each hemp-based input must at least reflect legal compliance requirements with respect to applicable federal, state, or tribal licensing to grow hemp and maximum allowable THC content.

5.3.1.1 A hazard or risk analysis with associated approval procedures must be documented for each kind of component used in certified products, including but not limited to biological, chemical,
5.3.2 Operators must establish a qualification procedure for all suppliers of ingredients used in certified products, as well as for contract manufacturers of finished goods. This procedure must be followed and documented for each approved supplier, and a current list of approved suppliers maintained. Suppliers of hemp inputs must be re-qualified on an annual basis as part of their certification renewal. Suppliers of other inputs must be evaluated and if necessary re-qualified on an annual basis as part of their certification renewal.

Guidance: Qualification procedures should at a minimum use this Standard’s applicable requirements as a baseline guideline (or checklist) to verify suppliers’ competence.

5.3.3 Operators must always either receive hemp inputs with relevant valid analyses already done to address their own established specifications or must conduct such analyses themselves. Parameters for analyses must be specified per input. If relying on suppliers’ analyses, operators must verify the sampling and testing program of their supplier.

5.3.4 Non-hemp inputs may be sourced according to specifications as delineated in clause 5.3.1.

Guidance: 5.3.1 presumes necessities pertinent to section 5.1 are also followed.

5.3.5 Any inputs, packaging or other materials received for activities under this Standard must be documented. All documents issued by the supplier as well as those kept the receiving operation as required by this Standard must be on file.

5.3.6 Imported inputs must be accompanied by permits and declarations as required by the operator’s legal jurisdictional authorities. Operators are responsible for demonstrating their knowledge of applicable legal requirements and their methods for keeping up to date on them.

5.3.7 Operators must identify any inputs found to be non-conforming and document their disposition.

5.4 SAMPLING AND TESTING OF INPUTS AND PRODUCTS

5.4.1 Processor/Manufacturers must implement sampling and testing plans for hemp and hemp derivatives in a manner that is statistically significant, yields a statistically representative sample for analysis and yields a result with a minimum confidence level of 95%. Operators must specify their sampling procedure, which must be evaluated and approved by the certification body.

Guidance: If a Processor wishes to composite samples, this may be done in a manner that ensures that any composite sample exceeding specification limits produces a positive result for the composite sample as a whole and each single component included in the composite would need to be re-tested.

5.4.2 Sampling procedures must retain enough of the sample to enable at least one repetition of the analysis in case questionable results are obtained. Samples must be retained for at least the stated shelf life of the certified product as well as the hemp-derived inputs that were used to make it.

5.4.3 Laboratories conducting analyses on hemp ingredients and finished product must be accredited to ISO 17025 for the specific tests involved, or proficiency testing in cases where ISO protocols have not been established.
5.4.4 Cannabinoid quantification methods must be able to determine the concentration of target cannabinoids and must effectively distinguish Cannabis as either legal hemp or marijuana.

5.4.4.1 Methods must be accurate and precise at concentrations that bracket 0.3% THC\(^1\) on a dry weight basis. Laboratories must adopt fit for purpose validated analytical methods that meet AOAC\(^2\) SMPR 2019.003, such as AOAC Official Method of Analysis 2018.11, or use equivalent official methods. (See also https://www.aoac.org/wp-content/uploads/2019/10/SMPR-2019_003.pdf).

5.4.5 Testing of hemp and hemp derivatives for contaminants (heavy metals, pesticides, residual solvents, microbiology and mycotoxins), as required by the Processor/Manufacturer’s specifications and in line with the intended use and clause 5.3.1.1, must follow guidance as listed in the American Herbal Pharmacopoeia Cannabis Monograph, “Standards of Identity, Analysis and Quality Control” and the following AHPA Guidance Documents, unless said testing is determined by the certification body to be equivalent or better than those cited here:

Guidance: Testing for contaminants prior to processing is recommended to reduce the potential for finished products to test above legal or otherwise specified limits.

5.4.5.1 For pesticides, limits of quantitation for foods are listed in AOAC Official Method 2007.1, “Pesticide Residues in Foods” at http://www.weber.hu/Downloads/SPE/QuEChERS/AOAC_2007_01.pdf. Tolerances for pesticides (EPA) may be found at https://www.epa.gov/pesticide-products-registered-use-hemp. Alternatively, the limits set by the California Bureau of Cannabis Control may be used; please see https://bcc.ca.gov/law_regs/cannabis_order_of_adoption.pdf.

Guidance: Note that most pesticide testing panels do not include glyphosate; thus, if glyphosate testing is desired, that request must generally be specifically and separately made to the lab.

5.4.5.2 For heavy metals:


Guidance: AHPA guidance does not include the stricter limits for lead consumption required in the state of California under Proposition 65.

5.4.5.3 For microbiology and mycotoxins: The processor/manufacturer shall establish the microbiological and mycotoxin levels taking into consideration the intended consumer use of the finished product.

Guidance: microbiology limits are based on products consumed orally. Extraction processes should remediate the mycotoxin presence in the extracted material. It is advisable to test for mycotoxins/aflatoxins in raw biomass.

For further reference please see:

- **USP General Chapters 2021/2022 or 2061/2062**

\(^1\) 7 CFR 990.3(a)(3) states “... testing methodology must consider the potential conversion of delta-9 tetrahydrocannabinolic acid (THC-A) in hemp into THC and the test result measures total available THC derived from the sum of the THC and THC-A content.”

\(^2\) AOAC International (formerly Association of Analytical Chemists); SMPR is standard method performance requirements.
5.4.5.4 For residual solvents: USP General Chapter 467.

5.4.6 Analytical specifications must be established for all finished products, including quantitative limits on contaminants including pesticides and heavy metals, residual solvents, microbiological pathogens and toxins, target quantities of cannabinoids, and THC.

5.4.6.1 Analysis must show that degradation of cannabinoids within shelf-life of product does not result in amount of active ingredients being lower than that which the label declares.

5.4.7 Each finished batch of product must be sampled and tested to assure that it meets specifications. Sampling and testing must be done in accordance with clauses 5.4.1 through 5.4.6.

5.5 PRODUCTION & PROCESS CONTROLS

5.5.1 Inputs must be received in a manner that prevents contamination, affirms the integrity of the packaging, follows the facility’s established procedure for sampling and sample retention per section 5.4 and distinguishes between accepted and rejected lots. In the case of rejected lots, the disposition of those lots must be recorded.

5.5.2 All inputs must be properly labeled at all times and must include identity of material and lot number.

5.5.3 Inputs and finished products must be traceable by batch or lot back to the source(s) from which they each are obtained. All transfer and use of inputs must be reflected in documentation.

5.5.4 All approved inputs must be received, stored, and processed during all stages of handling and processing to keep them separate from commingling with non-approved inputs.

5.5.5 All formulation components must meet the requirements of this Standard for a given product to be certified.

5.5.6 All movements and transformations of inputs into finished products must be duly recorded as to the equipment used, the exact amounts and lot numbers of each input used, the final output of product, specific by-products created and their disposition, and quantity wasted or lost during the process.

5.5.7 All work-in-progress must be clearly labeled to maintain its product and lot identity.

5.5.8 Packaging materials must be received, stored, and used in a manner that prevents contamination of finished products by any unapproved substances, whether from the surrounding environment or from the packaging material itself.

5.5.9 Non-retail containers of finished goods must at least be labeled to indicate the product name and lot number.

5.5.10 Retail containers of finished goods must comply with section 6.2 of this Standard.

5.6 STORAGE, TRANSPORTATION & DISTRIBUTION

5.6.1 All stored products must be clearly labeled to enable their identification.
5.6.2 Operators must have an inventory tracking system in place that updates all quantities of stock as changes occur.

Guidance: For larger facilities, it is advisable that the inventory system also indicate the exact locations of different kinds of stock.

5.6.3 Storage areas and distribution centers must protect the quality of goods stored by providing adequate space, environmental conditions (including but not limited to temperature and humidity), and protection from the elements, pests, and potential contaminants (physical, chemical, or biological).

5.6.4 Operators must regularly monitor off-site storage units as relevant and document their monitoring activities to assure compliance with these standards.

5.6.5 Operators must verify and document that transport vehicles are clean and protect certified inputs from damage or contamination.

Guidance: Special attention should be paid to goods shipped in permeable containers (eg raw hemp biomass).

5.6.6 Up-to-date records must be maintained for amounts of hemp-based ingredients and finished products sold, discarded, or otherwise used (eg as samples).

5.6.7 Exported goods must be accompanied by permits and declarations as required by the operator’s legal jurisdictional authorities, as well as other relevant requirements of this Standard. Operators are responsible for demonstrating their knowledge of applicable legal requirements and their methods for keeping up to date on them.

5.7 QUALITY CONTROL

5.7.1 Record Keeping – Operators must maintain records to demonstrate compliance with this Standard and have them readily available to certification body personnel. Records must be retained for at least five (5) years, or longer if required by the regulatory authority having jurisdiction. Records must be stored in such a way that they remain legible and retrievable.

Guidance: Electronic records should be backed up regularly to assure that redundant copies exist. Hard-copy documents must be stored so that they are protected from degradation by the elements.

5.7.2 Document control – A system must be in place to assure that all personnel use the most current version of any given document involved with certified production.

5.7.3 Employee training – All personnel undertaking any activity involved with certified production under this Standard must be trained and competent in the operation’s specified procedures for complying with this Standard. Personnel must be able to demonstrate their knowledge of their related responsibilities. Training must be effectively documented and updated as changes are needed.

5.7.4 Equipment calibration – All equipment used in certified production must be regularly and appropriately calibrated to assure that processes and measurements are controlled and accurate. Operators must document how such calibration has been done.
5.7.5 Sample retention – Samples of hemp-specific inputs and finished products must be retained for each production lot and held under environmental conditions that mitigate degradation for at least the stated shelf-life of the product in question.

**Guidance:** *It is recommended to retain samples for longer than the minimum specified above. Such samples may be retained directly by the Brand Owner, or by the manufacturer of the finished product, but in the latter case they must be available to the Brand Owner as necessary to comply with certification requirements.*

5.7.6 Hold and release – Operators must have a system in place to hold (quarantine) and segregate all finished products for final inspection and quality control measures before they are released for distribution outside the facility.

5.7.7 Non-conforming materials – Products or inputs failing to conform with internal specifications or those of this Standard must not be used or distributed for certified production. Their disposition must be documented and approved by authorized quality assurance personnel. A root-cause analysis of the reason for the nonconformance must be undertaken and documented along with corrective actions to prevent recurrence.

**Guidance:** *Non-conforming materials in some cases may be re-worked in order to make them usable for certified production; the operation must have specific written guidelines, procedures, and documentation to reflect compliance with this Standard.*

5.7.8 Recalls – A product recall system must be in place and verified at least annually to assure its effectiveness, and all such actions (real or mock) documented as to when they occurred and the results, including the degree of effectiveness (% recovery and amount of time elapsed).

**Guidance:** *The recall must be achievable within 4 hours.*

5.7.9 Complaints – Operators must have a system in place to receive, log, respond to and resolve any complaints received about its products or operations. At a minimum documentation must include the original complaint in the form received, the date, the nature of the complaint, the response, and the resolution. Complaints received only verbally must be documented by the processor/manufacturer.

5.7.9.1 For complaints about dietary supplements, adverse event reporting as legally required pursuant to 21 CFR 111, Subpart O – Product Complaints must also occur.


5.7.10 Internal audit – Operators must at least annually conduct an internal audit of its physical operations and record keeping in conformance with this Standard, with the results documented along with any corrective actions and timelines for achieving them.
6 Requirements for Brand Owners & Labeling Retail Products

6.1 Brand Owners’ Products & Sourcing

6.1.1 The Brand Owner must maintain written specifications of its own requirements for each product it sells under this Standard, which shall also explicitly refer to compliance with the U.S. Hemp Authority Standard. Specifications for each product must include the formulation such that label declarations at least reflect legal compliance with respect to applicable federal, state, or tribal licensing to grow hemp and ingredient content and maximum allowed contaminants for their product category, as well as for THC content.

6.1.2 Brand Owners must establish a qualification procedure for all suppliers of products included in their U.S. Hemp Authority certification, adhering to the requirements of this Standard. This procedure must be documented as having been followed for each approved supplier, and a current list of approved suppliers maintained. Non-U.S. Hemp Authority-certified contract manufacturers of Brand Owner finished consumer products may be subject to direct inspection and audit by the certification body in instances where Brand Owner’s supplier qualification program is not able to obtain full disclosure of information necessary to show compliance with this Standard.

6.1.2.1 If a GMP, food safety, or similar third-party audit is a necessary component of the supplier qualification procedure, the audit report and any related corrective action plan/resolution must be made available to the certification body, to assure accordance with sections 5.1 and 5.3 of this Standard.

Guidance: Qualification procedures should at a minimum use this Standard’s applicable requirements as a baseline guideline (or checklist) to verify suppliers’ competence.

6.1.3 Brand Owners must always either have relevant valid analyses already done by the final manufacturer to address their own established specifications or must conduct such analyses themselves. Parameters for analyses must be specified per product. If relying on suppliers’ analyses, operators must first validate the testing program of their supplier through a method that both (i) evaluates the supplier’s sampling and testing procedure, and (ii) validates the analyses presented on each product by conducting their own analysis in order to reproduce the results.

6.2 Labeling

6.2.1 With respect to all claims relating to hemp and hemp-derived ingredients, all products for consumer use must be labeled according to applicable parts of Title 21 of the Code of Federal Regulations for foods and dietary supplements, the Food Drug & Cosmetic Act for cosmetics as applicable, as well as any additional state or tribal government requirements. Brand Owners are responsible for demonstrating how they stay informed of what legal labeling requirements apply to their operations regardless of the type of product(s), and how they keep up to date regarding such requirements on an ongoing basis.

Guidance: Federal regulations that merit attention in particular include:

- 21 CFR §§ 101.1-101.108, 190.6—Food Labeling (including Dietary Supplements)
- 21 CFR §§ 111.1-111.610—Current Good Manufacturing Practice in Manufacturing, Packaging, Labeling, or Holding Operations for Dietary Supplements
6.2.2 All labels for products certified under this Standard must be approved in writing by the certification body.

6.2.3 For hemp ingredients grown outside the United States, a country-of-origin statement must be included on the label. Country abbreviations other than for the United States of America are not acceptable.

6.2.4 Certified products under this Standard may not include any bioengineered substance unless duly disclosed on the product label in accordance with 7 CFR 66 (National Bioengineered Food Disclosure Standard).

6.2.5 Use of the terms “broad spectrum,” “full spectrum,” and “isolate” on labels shall be consistent with the definitions of these terms in Section 1 of this Standard. Any use of isolate(s) shall be disclosed on the supplement facts panel, nutrition facts panel, or ingredients list, as required under federal labeling regulation.

6.2.6 Nutrition Facts panels and allergen statements must be included on food and beverage products, supplement fact panels must be included on dietary supplement products, and drug facts panels for OTC drugs.

Guidance:

Food and beverage nutrition fact panels should also follow FDA guidelines that are outlined in the FDA Food Labeling Guide, found at:


Supplement fact panels should also follow FDA guidelines that are outlined in the FDA’s Dietary Supplement Guide, found at: https://www.fda.gov/food/dietary-supplements-guidance-documents-regulatory-information/dietary-supplement-labeling-guide

Cosmetics should be labeled consistent with the FDA’s Cosmetic Labeling Guide, found at:

https://www.fda.gov/media/88234/download

6.2.7 Claims must be truthful and not misleading. In particular, claims of products being “free from” or having “zero” content (eg “zero GMOs” or “zero pesticides”) are not considered realistic given the limits of analytical detection methods. Claims about being “free” of certain materials (eg THC, heavy metals, pesticides) are only allowed if accompanied by a clear statement, immediately adjacent to the “free” claim that the “free” claim means that analysis has shown no detection at the most sensitive practical analytical limit available (typically 0.01%).

6.2.8 No products may have labels or marketing that claim to diagnose, treat, prevent or cure any disease or have therapeutic effects.

6.2.9 All dietary supplements intended to support the structure or function of the body must include a disclaimer such as: “This product is not intended to diagnose, treat, cure or prevent any disease.”
Guidance: products containing measurable amounts of cannabinoids should include proper warnings and cautions, such as the following:

- This product should be used with caution when driving motor vehicles or operating heavy machinery.
- Use this product under the guidance of a physician if you have a medical condition, are pregnant or lactating\(^\text{13}\).
- Keep out of the reach of children.
- This product was manufactured from hemp material that meets federal requirements for hemp products; however, consumption may be flagged by some drug tests.
- Use with caution if subject to urinalysis.

6.2.10 All finished product packages labels must include a lot code that may be used to trace the product back to the manufacturer and thereby to its activities and the inputs used to make the product.

Guidance: The code can be a “best by” or expiration date as long as that can be used to trace to the relevant manufacturing data.

6.2.11 Use of the U.S. Hemp Authority seal may be in accordance with the U.S. Hemp Authority’s related Licensing Agreement and its Trademark and Branding Guidelines.

**ANNEX A – CERTIFICATION PROCESS**

U.S. Hemp Authority certification happens on an annual cycle, subject to annual update and renewal. The process is as follows:

**APPLICATION**

Operations wishing to become certified must submit an application, through a form provided by the U.S. Hemp Authority’s certification service provider, FoodChain ID. The application is made in 2 parts, the first to gauge the scope of the certification request and generate a Service Agreement, followed by a second part that includes more details about the operation and allows for a deeper technical review prior to inspection. FoodChain ID may request additional information and/or system corrections prior to releasing the case for audit.

**SERVICE PROPOSAL**

A Service Agreement is provided for certification which will set out the terms, conditions, and fee structure of the proposed certification. The Organization returns the signed agreement and proposal, agreeing to the audit and to commit to compliance with the Standard once certified. Details of fees are provided with the certification proposal and agreement and are listed in the [FAQ section of the U.S. Hemp Authority website](https://www.us hempauthority.org).

\(^\text{13}\) Note: FDA strongly advises against the use of CBD in any form during pregnancy or while breastfeeding.
AUDIT AND ON-SITE INSPECTIONS

FoodChain ID will assign a trained auditor to complete the certification audit. Auditors will:

- Confirm intentions set forth in the application;
- Audit operations to determine compliance;
- Present overall findings of the audit; and
- Provide a list of findings

On-site inspections (audits) are required for any operation that physically handles, packages, or labels certified product. Operations such as Brand Owners who do not physically handle product may be certified through a desk review only. FoodChain ID reserves the right however to conduct on-site audits in any case.

AUDIT REPORT, REVIEW, AND CORRECTIVE ACTIONS

The auditor will produce and submit a written report of the audit to FoodChain ID, who reviews the report and its findings and issues a letter to the applicant identifying any nonconformities that require correction prior to being granted certified status. FoodChain ID will send the applicant a copy of the report once the technical review of the report has been completed. Operations must demonstrate to FoodChain ID that any corrective actions imposed have been duly implemented as a condition for granting or renewing certification. Corrective action plans must be submitted by the operation within 30 days of receipt of FoodChain ID’s letter of findings, and then approved by FoodChain ID. Where the number or nature of any nonconformances raises doubt as to the effectiveness of systems or procedures, FoodChain ID may conduct a further on-site visit to verify corrective actions have been met.

CERTIFICATION

A certification decision will be made by FoodChain ID based on the report, corrective actions and closeout of non-conformances. If the decision is that certification is granted, a certificate will be issued to the applicant with an annual expiration date.

LICENSING AGREEMENT TO USE THE U.S. HEMP AUTHORITY SEAL AND NAME

Once certified, an operation has the right to use the U.S. Hemp Authority certification seal and name on its products and marketing materials by executing the U.S. Hemp Authority’s Licensing Agreement. Execution of this Agreement is facilitated by FoodChain ID between the operation and the U.S. Hemp Authority Secretariat. The certified operation agrees not to use its certification in such a manner to discredit the U.S. Hemp Authority or make statements regarding its product certification that the U.S. Hemp Authority may consider false or misleading or otherwise unauthorized. Use of the U.S. Hemp Authority reference includes any media including but not limited to websites or electronic or hardcopy marketing materials, specifications, and datasheets.
MAINTENANCE OF CERTIFICATION

FoodChain ID will contact the certified operation prior to annual expiry. This is generally 3 months before the expiration date of the current certification certificate. It is the responsibility of the certified operation to assure that it undertakes all necessary steps to maintain certification. If recertification is not sought, the use of the U.S. Hemp Authority certificate and seal, as applicable, shall cease on its annual expiry date and no new claims related to the certified status is allowed.

SUSPENSION OF CERTIFICATION

If the certified operation cannot provide satisfactory objective evidence of corrective actions to discharge non-conformances, certification may be suspended or withdrawn. If FoodChain ID or the U.S. Hemp Authority becomes aware of circumstances that raise doubt as to the ability of the certified operation to meet the responsibilities and requirements of the Standard, it may ask the operation for further information to clarify the situation. If no satisfactory explanation or assurances are received, FoodChain ID may revoke, suspend or withdraw certification. Operations may also choose to withdraw from the program through a formal withdrawal request in writing.

COMPLAINTS

Operations have the right to file a complaint. Complaints should be submitted in writing to FoodChain ID, detailing the nature of the issue, the personnel involved, and any relevant dates. Complaints will be handled according to FoodChain ID’s written complaint procedure.

APPEALS AND ADJUDICATION

Should an operation disagree with the certification decision, it has the right to appeal per FoodChain ID’s Appeals and Adjudication Procedure for the U.S. Hemp Authority Certification Program. An Adjudication Committee will be assigned to adjudicate the matter. The decision of the committee will be final. In circumstances of suspension, withdrawal, complaint, or appeal, the operation will be informed in writing of the action taken/decisions made. FoodChain ID will not reimburse any fees incurred.