

REGULATION 9

PRODUCTION OF CANNABIS PRODUCTS

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9.010 Hand and arm contact while engaged in extraction of concentrated cannabis or production of cannabis products.

1. Each cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products shall keep his or her hands and the exposed portions of his or her arms clean.
2. A cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products shall not have contact with exposed, finished cannabis products with his or her bare hands and shall use suitable barriers, including, without limitation, deli tissue, spatulas, tongs, single-use gloves or dispensing equipment when handling exposed, finished concentrated cannabis or cannabis products.
3. A cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products shall minimize bare hand and arm contact with exposed cannabis products that are not in a finished form.

9.015 Qualifications and duties of persons responsible for managing facility. Based on the risks inherent to the operation of a cannabis product manufacturing facility, the persons responsible for managing each such facility shall demonstrate to the Board knowledge of disease prevention, and the requirements of Title 56 of NRS and NCCR, by:

1. Complying with the provisions of Title 56 of NRS and NCCR and having no category I, II, II(b) or III violations pursuant to NCCR 4.035-4.050 during inspections.
2. Ensuring that at least one employee of the cannabis product manufacturing facility is available during all operating hours which is a certified food protection manager who has shown proficiency in the required information through passing a test that is part of a program which certifies a person to be a food protection manager and which:
 - (a) Has been evaluated and listed by an accrediting agency as conforming to national standards for organizations that certify persons as food protection managers; or
 - (b) Provides to such persons other training acceptable to the Board.
3. Responding correctly to the questions of an inspector of cannabis establishments regarding:
 - (a) The relationship between the prevention of disease and the personal hygiene of a cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products.
 - (b) The prevention of the transmission of disease by a cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products who has a disease or medical condition that may transmit disease.
 - (c) The symptoms associated with the diseases that are transmissible through cannabis products and ingredients.
 - (d) The significance of the relationship between maintaining the temperature for a certain amount of time for potentially hazardous cannabis products and ingredients and the prevention of illness transmission.
 - (e) The hazards involved in the consumption of raw or undercooked meat, poultry and eggs.
 - (f) The required temperatures and times for safe cooking of potentially hazardous cannabis products and ingredients, including, without limitation, meat, poultry and eggs.
 - (g) The required temperatures and times for the safe refrigerated storage, hot holding, cooling and reheating of potentially hazardous cannabis products and ingredients.

(h) The relationship between the prevention of illness transmission and the management and control of:

- (1) Cross contamination;
 - (2) Hand contact with finished cannabis products and ingredients;
 - (3) Hand washing; and
 - (4) Maintaining the establishment in a clean condition and in good repair.
- (i) The correct procedures for cleaning and sanitizing utensils and the surfaces of equipment that have direct contact with cannabis products and ingredients.
- (j) The identification of poisonous or toxic materials in the facility and the procedures necessary to ensure that those materials are safely stored, dispensed, used and disposed of according to applicable state and federal laws and regulations.

9.020 Creation of cannabis extracts; development of standard operating procedures, good manufacturing practices and training plan.

1. A cannabis product manufacturing facility may only use the methods, equipment, solvents, gases and mediums set forth in this section when creating cannabis extracts.
2. A cannabis product manufacturing facility may use the hydrocarbons N-butane, isobutane, propane, heptane or other solvents or gases exhibiting low to minimal potential human health-related toxicity approved by the Board. These solvents must be of at least 99 percent purity and a cannabis product manufacturing facility must, when using such solvents:
 - (a) Use the solvents in a professional grade, closed-loop extraction system designed to recover the solvents;
 - (b) Work in a spark-free environment with proper ventilation; and
 - (c) Follow all applicable local fire, safety and building codes in the processing and storage of the solvents.
3. A cannabis product manufacturing facility may use a professional grade, closed-loop CO₂ gas extraction system where every vessel is rated to a minimum of 900 pounds per square inch and it follows all applicable local fire, safety and building codes in the processing and the storage of the solvents. The CO₂ must be of at least 99 percent purity.
4. A cannabis product manufacturing facility may use heat, screens, presses, steam distillation, ice water and other methods without employing solvents or gases to create kief, hashish, bubble hash, infused dairy butter, or oils or fats derived from natural sources, and other extracts.
5. A cannabis product manufacturing facility may use food grade glycerin, ethanol and propylene glycol solvents to create cannabis extracts.
6. A cannabis product manufacturing facility which creates cannabis extracts must develop standard operating procedures, good manufacturing practices and a training plan before producing cannabis extracts for the marketplace. Any person using solvents or gases in a closed-looped system to create cannabis extracts must be fully trained on how to use the system, have direct access to applicable material safety data sheets and safely handle and store the solvents and gases.

9.025 Requirements and restrictions on use of non-cannabis ingredients.

1. Each cannabis product manufacturing facility shall ensure that it obtains non-cannabis ingredients, including hemp and CBD, for cannabis products from sources that comply with the requirements of federal and state law and regulations and are approved by the Board, including, without limitation, commercial and retail businesses.

2. A cannabis product manufacturing facility shall not use or prepare non-cannabis ingredients prepared or stored in a private home.
3. A cannabis product manufacturing facility must submit all new menu items and their ingredients to the appropriate Board Agent for approval on a form prescribed by the Board prior to production and sale of new products. A cannabis product manufacturing facility may not produce nasal spray, inhalers, eye drops, or medical devices.
4. A cannabis product manufacturing facility preparing menu items that require a HACCP plan as determined by the appropriate Board Agent must be approved by a processing authority prior to submission. Special processes requiring a HACCP plan include, but are not limited to, canning, reduced oxygen packaging, and other processes as determined by the appropriate Board Agent.

9.030 Protection of products and ingredients from cross-contamination.

1. Except as otherwise provided in subsection 2, each cannabis product manufacturing facility shall ensure that cannabis products and ingredients are protected from cross-contamination by:
 - (a) Separating raw animal ingredients during storage, preparation, holding and display from raw cannabis products, or other raw finished ingredients such as fruits and vegetables, and from concentrated cannabis and cooked or baked and finished cannabis products which are ready to eat or otherwise use.
 - (b) Except when combined as ingredients, separating types of raw animal ingredients from each, including, without limitation, meat, poultry and eggs, during storage, preparation, holding and display by preparing each type of raw animal ingredient at a different time or in a different area and:
 - (1) Using separate equipment for each type of raw animal ingredient; or
 - (2) Arranging each type of raw animal ingredient in equipment so that cross-contamination of one type of raw animal ingredient with another is prevented.
 - (c) Preparing each type of raw animal ingredient at different times or in separate areas.
2. The provisions of subsection 1 do not apply to items stored frozen in a freezer.
3. Cannabis products must be protected from contamination by storing the product in a clean, dry location:
 - (a) Where the products are not exposed to splashes, chemicals, dust or other contamination; and
 - (b) Fifteen centimeters or more above the floor.
4. Cannabis products and direct contact surfaces of equipment and utensils must be stored and handled in a manner that prevents any biological, chemical or physical contamination at all times.
5. Chemical sanitizer must be available for immediate use at the proper concentration during all hours of operation in a location other than a three-compartment sink.

9.035 Use of pasteurized eggs and egg products; cleanliness of equipment, utensils and articles; requirements for temperature controls. Each cannabis product manufacturing facility shall ensure that:

1. Pasteurized eggs or egg products are substituted for raw eggs in the preparation of cannabis products.
2. Cannabis products and ingredients only have contact with the surfaces of:
 - (a) Equipment and utensils that are cleaned and sanitized; or
 - (b) Single-service and single-use articles that have not previously been used.

3. Ingredients such as eggs, meat, poultry and cannabis containing these raw animal ingredients are cooked to heat all parts of the cannabis product to a temperature and for a time that complies with one of the following methods based on the product that is being cooked:
 - (a) At 145°F (63°C) or above for 15 seconds for meat, including, without limitation, commercially raised game animals.
 - (b) At 155°F (68°C) or above for 15 seconds for:
 - (1) Mechanically tenderized and injected meats; and
 - (2) Meat and commercially raised game animals if it is comminuted.
 - (c) At 165°F (74°C) or above for 15 seconds for poultry, stuffed meat, stuffed pasta, stuffed poultry or stuffing containing meat or poultry.
4. Except during preparation, cooking or cooling, potentially hazardous cannabis products and ingredients are maintained:
 - (a) At 135°F (57°C) or above; or
 - (b) At 41°F (5°C) or less.
5. During the thawing process, potentially hazardous cannabis products and ingredients are:
 - (a) Maintained at 41°F (5°C) or less; and
 - (b) Thawed:
 - (1) Under refrigeration;
 - (2) Under cool running water;
 - (3) As part of the cooking process; or
 - (4) In a microwave only if the potentially hazardous cannabis products and ingredients will be cooked immediately thereafter.

9.040 Clear marking of potentially hazardous cannabis products; determination of expiration date and shelf life of perishable products.

1. Each cannabis product manufacturing facility shall ensure that:
 - (a) Potentially hazardous cannabis products and ingredients prepared and held by the facility for more than 24 hours are clearly marked to indicate the date or day by which the item must be consumed, sold or discarded when held at a temperature of 41°F (5°C) or less for a maximum of 7 days or, if the item is frozen, when the item is subsequently thawed and held at a temperature of 41°F (5°C) or less for a maximum of 7 days; and
 - (b) Potentially hazardous cannabis products and ingredients that are prepared and packaged by a commercial processing plant are clearly marked at the time that the original container is opened and, if the item is held for more than 24 hours, indicate the date or day by which the item must be consumed, sold or discarded, based on the temperature and time combination set forth in paragraph (a). The day on which the original container is opened in the cannabis establishment must be counted as “day 1.” The day or date marked by the cannabis product manufacturing facility may not exceed a use-by date of the manufacturer if the manufacturer determined the use-by date.
 - (c) Products are not held past the expiration, sell by or use-by date.
2. If a cannabis product manufacturing facility produces a cannabis product which is perishable, the expiration date for the cannabis product must:
 - (a) Be determined as a result of shelf-life testing pursuant to subsection 3; or
 - (b) Not exceed 7 days, including the date of preparation of the cannabis product if the cannabis product is refrigerated.

3. A cannabis product manufacturing facility shall perform testing, as specified by the Board, to determine the shelf life of each cannabis product which is perishable for the first production run of each such cannabis product. The appropriate Board Agent will determine which cannabis products require testing to determine shelf life during the review and approval of each cannabis product. New testing pursuant to this subsection must be performed for any change in the recipe, production run size or equipment used to produce a cannabis product.

9.045 Edible cannabis products: Testing to ensure homogeneity of potency; requirements for sale; approval of Board required for certain changes.

1. Each cannabis product manufacturing facility shall contract with a cannabis testing facility to perform testing to ensure the homogeneity of the potency of the product on each edible cannabis product produced by the facility. A cannabis product manufacturing facility shall not sell an edible cannabis product unless the appropriate Board Agent has preapproved the production of the edible cannabis product and a cannabis testing facility has verified the homogeneity of the potency of the product as described in NCCR 11.060.

2. A cannabis product manufacturing facility shall not sell an edible cannabis product other than a multiple-serving edible cannabis product or a single-serving edible cannabis product. An edible cannabis product sold as a multiple-serving edible cannabis product must not contain more than 100 milligrams of THC. An edible cannabis product sold as a single-serving edible cannabis product must not contain more than 10 milligrams of THC.

3. A cannabis product manufacturing facility shall not sell an edible cannabis product unless the appropriate Board Agent has approved that:

(a) The recipe and production procedures for the edible cannabis product will ensure consistent concentration of THC for the edible cannabis product; and

(b) The cannabis product manufacturing facility has demonstrated that its process for producing the edible cannabis product produces a homogenous product.

4. Any change in the recipe, production run size or equipment used to produce an edible cannabis product must be approved by the appropriate Board Agent. The Board Agent may require new approval or testing pursuant to this section for such a change.

9.050 Requirements for sinks and running water.

1. Each cannabis product manufacturing facility shall ensure that it provides:

(a) A sink with at least three compartments for manually washing, rinsing and sanitizing equipment and utensils;

(b) Sink compartments that are large enough to accommodate immersion of the largest equipment and utensils; and

(c) Running water that reaches a minimum temperature of 120°F (49°C).

2. If equipment or utensils are too large for the warewashing sink, a cannabis product manufacturing facility must use a warewashing machine or alternative equipment.

9.055 Requirements for sanitizers. Each cannabis product manufacturing facility shall ensure that:

1. In a mechanical operation, the temperature of the fresh hot water sanitizing rinse as it enters the manifold is not more than 194°F (90°C) or less than 180°F (82°C).
2. A chemical sanitizer used in a sanitizing solution for a manual or mechanical operation at contact times is used in accordance with the manufacturer's label use instructions that are approved by the Environmental Protection Agency, and as follows:
 - (a) A chlorine solution must have a concentration between 50 parts per million and 100 parts per million or be otherwise prepared in accordance with the manufacturer's label.
 - (b) An iodine solution must have a concentration between 12.5 parts per million and 25 parts per million or be otherwise prepared in accordance with the manufacturer's label.
 - (c) A quaternary ammonium compound solution must have a concentration between 150 parts per million and 400 parts per million or be otherwise prepared in accordance with the manufacturer's label.
3. If a chemical sanitizer other than chlorine, iodine or a quaternary ammonium compound is used, it is applied in accordance with the manufacturer's label use instructions that are approved by the Environmental Protection Agency and the use of the chemical sanitizer is approved by the appropriate Board Agent.
4. A sanitizer bucket or spray bottle is readily available during all hours of operation and kept at the proper concentration.
5. Test strips which are appropriate for the type of chemical sanitizer in use are available and used properly.

9.060 Requirements for materials used in construction of utensils and contact surfaces.

Each cannabis product manufacturing facility shall ensure that the materials that are used in the construction of utensils and the contact surfaces of equipment:

1. Do not allow the migration of deleterious substances or impart colors, odors or tastes to cannabis products; and
2. Under normal use conditions are:
 - (a) Safe;
 - (b) Durable, corrosion-resistant and nonabsorbent;
 - (c) Sufficient in weight and thickness to withstand repeated warewashing;
 - (d) Finished to have a smooth, easily cleanable surface; and
 - (e) Resistant to pitting, chipping, crazing, scratching, scoring, distortion and decomposition.

9.065 Requirements for lighting. Each cannabis product manufacturing facility shall ensure that the light intensity in the facility is:

1. At least 20-foot candles (215 lux):
 - (a) At a distance of 30 inches (75 cm) above the floor in walk-in refrigeration units and areas for storage of dry cannabis products and in other areas and rooms during periods of cleaning;
 - (b) Inside equipment such as reach-in and under-counter refrigerators; and
 - (c) At a distance of 30 inches (75 cm) above the floor in areas used for hand washing, warewashing and equipment and utensil storage and in toilet rooms.

2. At least 50-foot candles (540 lux) at a surface where a cannabis establishment agent engaged in the extraction of concentrated cannabis or production of cannabis products is working with cannabis products or working with utensils or equipment, including, without limitation, knives, slicers, grinders or saws where employee safety is a factor.

9.070 Requirements for filters for liquid filtration; prohibition on asbestos-containing filter.

1. Each cannabis product manufacturing facility shall ensure that filters for liquid filtration used in the extraction of concentrated cannabis or manufacture, processing or packaging of cannabis products intended for human use do not release fibers into such products.
2. A cannabis product manufacturing facility shall not use an asbestos-containing filter.

9.075 Sufficiency of ventilation hood systems and devices. Each cannabis product manufacturing facility shall ensure that its ventilation hood systems and devices are sufficient in number and capacity to prevent grease or condensation from collecting on walls and ceilings.

9.080 Sufficiency of mechanical ventilation. Each cannabis product manufacturing facility shall ensure that it provides mechanical ventilation of sufficient capacity as necessary to keep rooms free of excessive heat, steam, condensation, vapors, obnoxious odors, smoke and fumes.

9.085 Surfaces of equipment and utensils: Cleanliness. Each cannabis product manufacturing facility shall ensure that:

1. The surfaces of equipment and utensils that have direct contact with cannabis products are clean to sight and touch;
2. The surfaces of cooking equipment and pans that have direct contact with cannabis products are kept free of encrusted grease deposits and other soil accumulations; and
3. The surfaces of equipment that do not have direct contact with cannabis products are kept free of an accumulation of dust, dirt, residue and other debris.

9.090 Surfaces of equipment and utensils: Frequency of and activities requiring cleaning.

Each cannabis product manufacturing facility shall ensure that:

1. The surfaces of equipment and utensils that have direct contact with cannabis products are cleaned:
 - (a) Before each use with a different type of raw animal ingredient, including, without limitation, beef, pork or poultry;
 - (b) Each time there is a change from working with raw cannabis products to working with finished cannabis products;
 - (c) Between uses with raw fruits and vegetables and with potentially hazardous cannabis products and ingredients, using the appropriate time and temperature controls to ensure the safety of the cannabis products; and
 - (d) At any time during operation when contamination may have occurred.
2. If the surfaces of equipment or utensils come into contact with potentially hazardous cannabis products and ingredients, the surfaces and utensils are cleaned throughout the day at least once every 4 hours.
3. The surfaces of utensils and equipment that have direct contact with cannabis products and ingredients that are not potentially hazardous are cleaned:
 - (a) At any time when contamination may have occurred; and

(b) In equipment, including, without limitation, ice bins and beverage dispensing nozzles, and enclosed components of equipment, such as ice makers, cooking oil storage tanks and distribution lines, beverage and syrup dispensing lines or tubes, coffee bean grinders and water vending equipment:

- (1) At a frequency specified by the manufacturer; or
- (2) If the manufacturer does not specify a frequency, at a frequency necessary to prevent the accumulation of soil or mold.

9.095 Surfaces and utensils: Sanitation. Each cannabis product manufacturing facility shall ensure that:

1. The surfaces and utensils that have direct contact with cannabis products are adequately washed, rinsed and sanitized.
2. After being cleaned, surfaces of equipment and utensils that have direct contact with cannabis products are sanitized in:
 - (a) Hot water manual operations by immersion for at least 30 seconds with a temperature of 170°F (77°C) or above;
 - (b) Hot water mechanical operations by being cycled through equipment that is set up and achieving a utensil surface temperature of 160°F (71°C) as measured by an irreversible registering temperature indicator; or
 - (c) Chemical manual or mechanical operations, including, without limitation, the application of sanitizing chemicals by immersion, manual swabbing, brushing or pressure spraying methods using a solution as specified on the manufacturer's label use instructions that are approved by the Environmental Protection Agency, by providing an exposure time of at least 30 seconds unless the manufacturer's label use instructions provide otherwise.

9.100 Surfaces of cooking and baking equipment and door seals of microwave ovens:

Cleanliness. Each cannabis product manufacturing facility shall ensure that:

1. The surfaces of cooking and baking equipment that have direct contact with cannabis products are cleaned at least once every 24 hours; and
2. The cavities and door seals of microwave ovens are cleaned at least once every 24 hours by using the recommended cleaning procedure of the manufacturer.