

## REGULATION 11

### CANNABIS INDEPENDENT TESTING LABORATORY

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**11.010 Employment, qualifications and duties of scientific director; inspection of testing laboratory upon appointment of new director.**

1. Each cannabis independent testing laboratory must employ a scientific director who must be responsible for:
  - (a) Establishing and maintaining a quality control and quality assurance program that ensures the quality of the cannabis independent testing laboratory's services, and that is capable of identifying any failure of quality when it occurs;
  - (b) Supervising all staff of the cannabis independent testing laboratory; and
  - (c) Actively participating in the operation of the testing laboratory to the extent necessary to assure compliance with the provisions of this Act.
2. The scientific director of a cannabis independent testing laboratory must have earned:
  - (a) A doctorate degree in science from an accredited college or university and have at least 2 years of post-degree laboratory experience;
  - (b) A master's degree in science from an accredited college or university and have at least 4 years of post-degree laboratory experience; or
  - (c) A bachelor's degree in science from an accredited college or university and have at least 6 years of post-degree laboratory experience.
3. If a scientific director is no longer employed by a cannabis independent testing laboratory, the cannabis independent testing laboratory shall not be permitted to conduct any testing. An interim director that meets the minimum qualifications may be appointed for no more than 90 days.
4. A cannabis independent testing laboratory shall immediately inform the Board upon the appointment of a new scientific director.
5. A scientific director shall be available to the personnel of a testing laboratory, in person or by telephonic or other electronic means, for any necessary consultation.
6. The scientific director must be on the premises of the testing laboratory at least 5 workdays each month.

(Amended: 8/2021)

**11.015 Requirements for testing laboratory to handle, test or analyze cannabis.**

1. A cannabis independent testing laboratory shall not handle, test or analyze cannabis unless:
  - (a) The cannabis independent testing laboratory has been issued a license;
  - (b) The cannabis independent testing laboratory is independent from all other persons involved in the cannabis industry in Nevada; and
  - (c) No person with a direct or indirect interest in the cannabis independent testing laboratory has a direct or indirect financial interest in:
    - (1) A cannabis sales facility;
    - (2) A cannabis production facility;
    - (3) A cannabis cultivation facility;
    - (4) A cannabis distributor;
    - (5) A provider of health care who provides or has provided written documentation for the issuance of registry identification cards or letters of approval;
    - (6) Any other entity that may benefit from the cultivation, manufacture, dispensing, sale, purchase or use of cannabis or cannabis products, or
    - (7) A cannabis consumption lounge.

2. A cannabis independent testing laboratory shall implement business practices which are structured and managed so as to safeguard impartiality in testing including:
  - (a) A testing laboratory may not offer a different fee schedule or waive payment in the event of failing or otherwise undesirable test results; and
  - (b) Refunds, rebates or any other return of payment in the form of alternate compensation is not permitted for the reason of failing or otherwise undesirable test results.
3. A cannabis independent testing laboratory is not required to use a cannabis distributor to collect or move samples for testing.

(Amended: 7/2022)

**11.020 Agreement to become accredited within 1 year after licensure; provision of annual inspection report to Board; inspection by accrediting organization is not substitute for inspection by Board.**

1. Each cannabis independent testing laboratory must agree to become accredited pursuant to standard ISO/IEC 17025 of the International Organization for Standardization within 1 year after licensure. The scope of accreditation must cover all analytes pursuant to NCCR 11.050
2. Each cannabis independent testing laboratory that claims to be accredited must provide the Board with copies of each annual inspection report from the accrediting organization, including, without limitation, any deficiencies identified in and any corrections made in response to the report.
3. Inspection by an accrediting organization is not a substitute for inspection by the Board or Board Agents.

**11.025 Adherence to general laboratory standards, practices, procedures and programs; inspection by Board or authorized third party; adoption of publications by reference.**

1. Each cannabis independent testing laboratory must:
  - (a) Follow the most current version of the Cannabis Inflorescence: Standards of Identity, Analysis, and Quality Control monograph published by the American Herbal Pharmacopoeia.
  - (b) Follow the Recommendations for Regulators — Cannabis Operations published by the American Herbal Products Association.
  - (c) Be accredited pursuant to standard ISO/IEC 17025 of the International Organization for Standardization by an impartial organization that operates in conformance with standard ISO/IEC 17011 of the International Organization for Standardization and is a signatory to the Mutual Recognition Arrangement of the International Laboratory Accreditation Cooperation.
  - (d) Follow the Guidelines for Laboratories Performing Microbiological and Chemical Analyses of Food, Dietary Supplements, and Pharmaceuticals — An Aid to the Interpretation of ISO/IEC 17025:2005 (2015) published by AOAC International.
2. Each cannabis independent testing laboratory shall demonstrate proficiency in testing samples using the analytical methods approved by the Board or the appropriate Board Agent by participating in the approved proficiency testing program for all required analytes within 6 months after the date upon which the cannabis independent testing laboratory is issued a license.
3. The Board may require an independent third party to inspect and/or monitor the analytical testing methodologies and technical competence of the cannabis independent testing laboratory on an ongoing basis.
4. Each cannabis independent testing laboratory shall:

- (a) Adopt and follow minimum good laboratory practices which must, at a minimum, satisfy the OECD Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring published by the Organisation for Economic Co-operation and Development.
  - (b) Become certified by the International Organization for Standardization and agree to have the inspections and reports of the International Organization for Standardization made available to the Board or Board Agents.
  - (c) Maintain internal standard operating procedures. A copy of these procedures shall be provided promptly to the Board or Board Agents upon request.
  - (d) Maintain a quality control and quality assurance program.
5. The Board Agents or an independent third party authorized by the Board may conduct an inspection of the practices, procedures and programs adopted, followed and maintained pursuant to subsection 4 and inspect all records of the cannabis independent testing laboratory.
6. A cannabis independent testing laboratory must use, when available, testing methods that have undergone validation by the Official Methods of Analysis of AOAC International, the Performance Tested Methods Program of the Research Institute of AOAC International, the Bacteriological Analytical Manual of the Food and Drug Administration, the International Organization for Standardization, the United States Pharmacopeia, the Microbiology Laboratory Guidebook of the Food Safety and Inspection Service of the United States Department of Agriculture or an equivalent third-party validation study approved by the Board. If no such testing method is available, a cannabis independent testing laboratory may use an alternative testing method or a testing method developed by the cannabis independent testing laboratory upon demonstrating the validity of the testing method to and receiving the approval of the Board.
7. All quality assurance tests pursuant to NCCR 11.050. shall be validated or verified by the cannabis independent testing laboratory observing the guidelines of the most recent version of standard ASTM D8282: “Standard Practice for Laboratory Test Method Validation and Method Development”, published by the American Society for Testing and Materials (ASTM) and available at [www.astm.org](http://www.astm.org), or any subsequent standard as approved by the appropriate Board Agent.
8. The Board hereby adopts by reference:
- (a) The Cannabis Inflorescence: Standards of Identity, Analysis, and Quality Control monograph published by the American Herbal Pharmacopoeia. A copy of that publication may be obtained from the American Herbal Pharmacopoeia, P.O. Box 66809, Scotts Valley, California 95067, or at the Internet address <http://www.herbal-ahp.org/>
  - (b) The OECD Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring published by the Organisation for Economic Co-operation and Development. A copy of that publication may be obtained free of charge from the Organisation for Economic Co-operation and Development at the Internet address <http://www.oecd.org/env/ehs/testing/oecdseriesonprinciplesofgoodlaboratorypracticeglpandcompliancemonitoring.htm>
  - (c) Standard ISO/IEC 17025 published by the International Organization for Standardization. A copy of that publication may be obtained from the American National Standards Institute at the Internet address <https://webstore.ansi.org/RecordDetail.aspx?sku=ISO%2fIEC+17025%3a2005>
  - (d) The Guidelines for Laboratories Performing Microbiological and Chemical Analyses of Food, Dietary Supplements, and Pharmaceuticals — An Aid to the Interpretation of

ISO/IEC 17025:2005 (2015) published by AOAC International. A copy of that publication may be obtained from AOAC International at the Internet address <https://www.aoac.org/aoac-accrreditation-guidelines-for-laboratories-alacc/>

(Amended: 8/2021)

**11.030 Establishment of policies for adequate chain of custody and requirements for samples of products provided to testing laboratory.** Each cannabis independent testing laboratory must establish policies for an adequate chain of custody and sample identification requirements for samples of products provided to the cannabis independent testing laboratory for testing or research purposes, including, without limitation, policies and requirements for:

1. Issuing instructions for the minimum sample and storage requirements;
2. Documenting the condition of the external package and integrity seals utilized to prevent contamination of, or tampering with, the sample;
3. Documenting the condition and amount of the sample provided at the time of receipt;
4. Documentation of any pertinent sample identifiers, including but not limited to product type, product name, strain name, seed-to-sale tracking number, batch/lot number and production run number as appropriate;
5. Documenting all persons handling the original samples, aliquots and extracts;
6. Providing adequate identification on sample containers throughout all phases of testing, including, but not limited to aliquots, dilutions, tubes, slides, culture plates, extracts, data files, images, and other secondary samples created during the processing or testing of a sample. The sample identifier(s) on any sample container must be indelible, legible, and able to withstand all stages of processing and conditions of storage;
7. Documenting all transfers of samples, aliquots and extracts referred to another cannabis independent testing laboratory for additional testing or whenever requested by a client;
8. Maintaining a current list of authorized cannabis establishment agents and restricting entry to the laboratory to only those authorized;
9. Securing the cannabis independent testing laboratory during nonworking hours;
10. Securing short- and long-term storage areas when not in use;
11. Utilizing a secured area to log-in and aliquot samples;
12. Ensuring samples are stored appropriately; and
13. Documenting the disposal of samples, aliquots and extracts.

**11.035 No limitation on amount of usable cannabis and cannabis products on premises of testing laboratory; maintenance of records to prove amount on premises is for testing purposes only.** A cannabis independent testing laboratory is not limited in the amount of usable cannabis and cannabis products it may have on the premises of the cannabis independent testing laboratory at any given time, but the cannabis independent testing laboratory must maintain records to prove that all usable cannabis and cannabis products on the premises are there for testing purposes only.

**11.040 Proficiency testing program: Establishment by Board; required participation by testing laboratory; conditions for successful participation; unsuccessful participation grounds for limitation, suspension or revocation of license; proficiency testing inter-laboratory communication and referral prohibited.**

1. The Board will establish a proficiency testing program for cannabis testing facilities. A proficiency testing program must include, without limitation, providing rigorously controlled and standardized proficiency testing samples to cannabis testing facilities for analysis, reporting the results of such analysis and performing a statistical evaluation of the collective demographics and results of all cannabis testing facilities.

2. Each cannabis independent testing laboratory must participate in the proficiency testing program established pursuant to this section.
3. A cannabis independent testing laboratory must successfully participate in one of the approved proficiency testing programs that covers all required analytes a minimum of every 12 months in order to maintain continued licensure.
4. To maintain continued licensure as a cannabis independent testing laboratory, a cannabis independent testing laboratory must participate in the designated proficiency testing program with continued satisfactory performance as determined by the appropriate Board Agent.
5. A cannabis independent testing laboratory must analyze proficiency testing samples using the same procedures with the same number of replicate analyses, standards, testing analysts and equipment as used for product testing. All proficiency testing samples must be integrated within the routine laboratory workload whenever possible.
6. The scientific director of the cannabis independent testing laboratory and all testing analysts that participated in proficiency testing must sign corresponding attestation statements.
7. All proficiency testing results received must be reviewed by the scientific director and appropriate staff members. Upon receipt of results from the proficiency testing provider, the testing laboratory shall do the following:
  - (a) Evaluate the testing laboratory's performance and perform corrective action for any unsatisfactory results received. Failure to provide a result for a required analyte shall be considered an unacceptable result.
  - (b) Investigate any unsatisfactory results, to include a retrospective review of potentially affected cannabis samples whenever applicable.
  - (c) Document investigation findings and any resultant corrective actions, if applicable, and maintain the documentation for a period of at least five years.
8. Successful participation includes an acceptable score for each and every target analyte that the cannabis independent testing laboratory reports to include quantitative results when applicable. Issues related to samples provided by the proficiency testing company will be reviewed on a case-by-case basis.
9. A testing laboratory who fails to achieve an acceptable score for a required quality assurance test shall:
  - (a) Notify the appropriate Board Agent in writing within 24 hours.
  - (b) Repeat the proficiency testing of any failed tests within 30 calendar days or as otherwise approved by the appropriate Board Agent. If the testing laboratory fails to perform satisfactorily for the same required quality assurance test in two consecutive proficiency testing events, or two out of three proficiency testing events, the testing laboratory may be required to cease the performance of testing for those analytes until it demonstrates to the satisfaction of the appropriate Board Agent that the nonconformances have been corrected in such a manner as to ensure that they will not recur.
10. Unsuccessful participation in proficiency testing may result in limitation, suspension, denial of renewal of license, or revocation of the license of the cannabis independent testing laboratory.
11. The Board will select a proficiency testing provider(s) to conduct the proficiency testing program and determine the schedule that the proficiency testing provider will follow when sending proficiency testing samples to cannabis testing facilities for analysis.

12. In addition to achieving the standard required pursuant to subsection 8, a cannabis independent testing laboratory successfully participates in the proficiency testing program only if the cannabis independent testing laboratory:

- (a) Obtains single-blind proficiency testing samples from the proficiency testing provider;
- (b) Analyzes the proficiency testing sample for all analytes listed in NCCR 11.050 to 11.065, inclusive;
- (c) Reports the results of its analysis to the proficiency testing provider;
- (d) Successfully performs proficiency testing for all required analytes pursuant to this Act not less frequently than once each 12 months;
- (e) Pays the costs of subscribing to the proficiency testing program; and
- (f) Ensures the proficiency testing provider submits to the appropriate Board Agent the results of any test performed pursuant to this section.

13. A cannabis independent testing laboratory shall not communicate with another cannabis independent testing laboratory about proficiency testing samples for a proficiency testing event until after the deadline for submission of results to the proficiency testing provider.

14. Proficiency testing samples shall not be referred to another testing laboratory for analysis and shall not be accepted from other testing laboratory for analysis.

(Amended: 8/2021)

**11.045 Limited testing for research and development purposes.**

1. A cannabis cultivation facility or a cannabis production facility may conduct operations and request limited laboratory testing by a cannabis independent testing laboratory for research and development purposes.

2. A cannabis cultivation facility or cannabis production facility described in subsection 1 shall:

- (a) Notify the appropriate Board Agent of its intent to conduct research and development on a form prescribed by the Board by electronic mail before sending a sample to a cannabis independent testing laboratory;
- (b) Receive approval from the appropriate Board Agent for the requested research and development studies.
- (c) Quarantine each batch, lot or production run in a separate quarantine area and label each batch, lot or production run with a distinctive label containing “R&D QUARANTINE” as a header and footer in 20-point white font and a red background;
- (d) Account for all cannabis subject to quarantine pursuant to paragraph (b) in the seed-to-sale tracking system;
- (e) Limit all research and development operations to clearly segregated and designated areas or rooms marked “R&D CULTIVATION AREA” or “R&D PRODUCTION AREA” on 8 1/2 by 11-inch signs with a red background and white lettering, posted at the entrance to the area or room and along the walls of the area or room, with a minimum of one sign for every 300 square feet of the area or room; and
- (f) Perform research and development operations in a grow room only if the plants used for such operations are designated and separated from other plants.

3. A cannabis cultivation facility or cannabis production facility operating as described in subsection 1 may request limited testing protocols from a cannabis independent testing laboratory for research and development purposes. A cannabis independent testing laboratory shall not perform any laboratory tests on research and development samples which were not specifically indicated as part of the approved study.



4. A cannabis independent testing laboratory that performs testing for a cannabis cultivation facility or cannabis production facility described in subsection 1 shall report the results of the testing to the cannabis establishment and to the Board by electronic mail. The cannabis independent testing laboratory shall clearly mark the test results with “R&D TESTING ONLY -- NOT FOR RESALE” on the top of each page of the report in 20-point white font and a red background.

5. A batch, lot or production run produced for research and development purposes pursuant to this section which fails quality assurance testing need not be destroyed.

6. A batch, lot or production run originally produced for research and development purposes pursuant to this section may not be sold to a cannabis sales facility until the batch, lot or production run has undergone and passed all testing required by NCCR 6.100.

**11.050 Required quality assurance tests; submission of wet cannabis for testing.**

1. Each cannabis independent testing laboratory must use the sampling protocols and the general body of required quality assurance tests for usable cannabis, as received, concentrated cannabis and cannabis products set forth in this section. Such tests may include moisture content, potency analysis, foreign matter inspection, microbial screening, pesticide and other chemical residue and metals screening and residual solvents levels. A cannabis independent testing laboratory may request permission from the appropriate Board Agent to obtain additional sample material for the purposes of completing required quality assurance tests but may not use such material for the purposes of resampling or repeating quality assurance tests. A cannabis independent testing laboratory may retrieve samples from the premises of another cannabis establishment and transport the samples directly to the cannabis independent testing laboratory. A cannabis independent testing laboratory transporting samples may make multiple stops if:

- (a) Each stop is for the sole purpose of retrieving a sample from a cannabis establishment; and
- (b) All samples remain secured at all times.

2. The tests required pursuant to subsection 1 by a cannabis independent testing laboratory are as follows:

Product	Tests Required	Action Levels
Usable cannabis, infused pre-rolls and crude collected resins, as received, excluding wet cannabis	1. Moisture content 2. Potency analysis 3. Terpene analysis 4. Foreign matter inspection 5. Mycotoxin screening 6. Heavy metal screening 7. Pesticide residue analysis 8. Herbicide screening 9. Growth regulator screening 10. Total yeast and mold 11. Total Enterobacteriaceae 12. Salmonella 13. Pathogenic E. coli 14. Aspergillus fumigatus 15. Aspergillus flavus 16. Aspergillus terreus	1. < 15% 2. N/A 3. N/A 4. None detected 5. < 20 µg/kg for the total of Aflatoxins B1, B2, G1 and G2 combined and < 20 µg/kg for Ochratoxin A 6. Arsenic: < 2 ppm Cadmium: < 0.82 ppm Lead: < 1.2 ppm Mercury: < 0.4 ppm 7. See NAC 555.640 8. See NAC 555.640 9. See NAC 555.640

Product	Tests Required	Action Levels
	17. <i>Aspergillus niger</i> 18. Total coliform	10. < 10,000 colony forming units per gram 11. < 1,000 colony forming units per gram 12. None detected per gram 13. None detected per gram 14. None detected per gram 15. None detected per gram 16. None detected per gram 17. None detected per gram 18. < 1,000 colony forming units per gram
Wet cannabis, as received, which is destined for extraction	1. Potency analysis 2. Terpene analysis 3. Foreign matter inspection 4. Mycotoxin screening 5. Heavy metal screening 6. Pesticide residue analysis 7. Herbicide screening 8. Growth regulator screening 9. Total yeast and mold 10. Total Enterobacteriaceae 11. Salmonella 12. Pathogenic <i>E. coli</i> 13. <i>Aspergillus fumigatus</i> 14. <i>Aspergillus flavus</i> 15. <i>Aspergillus terreus</i> 16. <i>Aspergillus niger</i> 17. Total coliform	1. N/A 2. N/A 3. None detected 4. < 20 µg/kg for the total of Aflatoxins B1, B2, G1 and G2 combined and < 20 µg/kg for Ochratoxin A 5. Arsenic: < 2 ppm Cadmium: < 0.82 ppm Lead: < 1.2 ppm Mercury: < 0.4 ppm 6. See NCCR 11.065 7. See NCCR 11.065 8. See NCCR 11.065 9. < 10,000 colony forming units per gram 10. < 1,000 colony forming units per gram 11. None detected per gram 12. None detected per gram 13. None detected per gram 14. None detected per gram 15. None detected per gram 16. None detected per gram 17. < 1,000 colony forming units per gram
Extract of cannabis (nonsolvent) like hashish, bubble hash, infused dairy butter, mixtures of extracted products or oils or fats derived from natural sources, including concentrated cannabis extracted with ethanol or CO <sub>2</sub>	1. Potency analysis 2. Foreign matter inspection 3. Mycotoxin screening 4. Heavy metal screening 5. Pesticide residue analysis 6. Total yeast and mold 7. Total Enterobacteriaceae 8. Salmonella 9. Pathogenic <i>E. coli</i> 10. <i>Aspergillus fumigatus</i>	1. N/A 2. None detected 3. < 20 µg/kg for the total of Aflatoxins B1, B2, G1 and G2 combined and < 20 µg/kg for Ochratoxin A 4. Arsenic: < 2 ppm Cadmium: < 0.82 ppm Lead: < 1.2 ppm Mercury: < 0.4 ppm

Product	Tests Required	Action Levels
	<ul style="list-style-type: none"> <li>11. Aspergillus flavus</li> <li>12. Aspergillus terreus</li> <li>13. Aspergillus niger</li> </ul>	<ul style="list-style-type: none"> <li>5. See NCCR 11.065</li> <li>6. &lt; 1,000 colony forming units per gram</li> <li>7. &lt; 100 colony forming units per gram</li> <li>8. None detected per gram</li> <li>9. None detected per gram</li> <li>10. None detected per gram</li> <li>11. None detected per gram</li> <li>12. None detected per gram</li> <li>13. None detected per gram</li> </ul>
Extract of cannabis (solvent-based) made with any approved solvent, including concentrated cannabis extracted by means other than with ethanol or CO2	<ul style="list-style-type: none"> <li>1. Potency analysis</li> <li>2. Foreign matter inspection</li> <li>3. Residual solvent test</li> <li>4. Mycotoxin screening</li> <li>5. Heavy metal screening</li> <li>6. Pesticide residue analysis</li> <li>7. Total yeast and mold</li> <li>8. Total Enterobacteriaceae</li> <li>9. Salmonella</li> <li>10. Pathogenic E. coli</li> <li>11. Aspergillus fumigatus</li> <li>12. Aspergillus flavus</li> <li>13. Aspergillus terreus</li> <li>Aspergillus niger</li> </ul>	<ul style="list-style-type: none"> <li>1. N/A</li> <li>2. None detected</li> <li>3. &lt; 500 ppm</li> <li>4. &lt; 20 µg/kg for the total of Aflatoxins B1, B2, G1 and G2 combined and &lt; 20 µg/kg for Ochratoxin A</li> <li>5. Arsenic: &lt; 2 ppm Cadmium: &lt; 0.82 ppm Lead: &lt; 1.2 ppm Mercury: &lt; 0.4 ppm</li> <li>6. See NCCR 11.065</li> <li>7. &lt; 1,000 colony forming units per gram</li> <li>8. &lt; 100 colony forming units per gram</li> <li>9. None detected per gram</li> <li>10. None detected per gram</li> <li>11. None detected per gram</li> <li>12. None detected per gram</li> <li>13. None detected per gram</li> <li>None detected per gram</li> </ul>
Edible cannabis product, including a product which contains concentrated cannabis	<ul style="list-style-type: none"> <li>1. Potency analysis</li> <li>2. Foreign matter inspection</li> <li>3. Total Enterobacteriaceae</li> <li>4. Salmonella</li> <li>5. Pathogenic E. coli</li> <li>6. Total aerobic count</li> <li>7. Water activity or pH</li> </ul>	<ul style="list-style-type: none"> <li>1. N/A</li> <li>2. None detected</li> <li>3. &lt; 1,000 colony forming units per gram</li> <li>4. None detected per gram</li> <li>5. None detected per gram</li> <li>6. &lt; 100,000 colony forming units per gram</li> <li>7. Water activity &lt; 0.86 or pH &lt; 4.6</li> </ul>

Product	Tests Required	Action Levels
Liquid cannabis product, including, without limitation, soda or tonic, including a product which contains concentrated cannabis	<ol style="list-style-type: none"> <li>1. Potency analysis</li> <li>2. Foreign matter inspection</li> <li>3. Total Enterobacteriaceae</li> <li>4. Salmonella</li> <li>5. Pathogenic E. coli</li> <li>6. Total aerobic count</li> <li>7. Water activity or pH</li> </ol>	<ol style="list-style-type: none"> <li>1. N/A</li> <li>2. None detected</li> <li>3. &lt; 1,000 colony forming units per gram</li> <li>4. None detected per gram</li> <li>5. None detected per gram</li> <li>6. &lt; 100,000 colony forming units per gram</li> <li>7. Water activity &lt; 0.86 or pH &lt; 4.6</li> </ol>
Topical cannabis product, including a product which contains concentrated cannabis	<ol style="list-style-type: none"> <li>1. Potency analysis</li> </ol>	<ol style="list-style-type: none"> <li>1. N/A</li> </ol>

3. A sample of usable cannabis must be at least 10 grams. A sample of a production run must be the lesser of 1 percent of the total product weight of the production run or 25 units of product, but not less than 5 grams of the production run. Before testing, all samples must be homogenized by the testing laboratory using a homogenization process which has been approved by the appropriate Board Agent and in a manner that prevents contamination of test samples or analytical portions.

4. The analytical portion that is used for the purposes of any microbial test must be a minimum of one gram, unless otherwise approved by the Board.

5. A cannabis establishment shall not submit wet cannabis to a cannabis independent testing laboratory for testing unless the wet cannabis is destined for extraction and weighed within 2 hours after harvest. The plant must not undergo any further processing, including, without limitation, drying the plant and subsequently selling separately the cannabis bud and cannabis trim from the plant, before being weighed.

6. As used in this section, “as received” means the unaltered state in which a sample was collected, without any processing or conditioning, which accounts for all mass, including moisture content. A cannabis independent testing laboratory shall not report the results of usable cannabis on a dry weight basis.

7. A cannabis independent testing laboratory shall provide the final certificate of analysis to the Board and to the cannabis establishment from which the sample was collected within 2 business days after obtaining the results.

8. The certificate of analysis shall include a photo of the product, as received.

(Amended: 11/2021)

**11.055 Performance of potency analysis or terpene analysis.**

1. When performing potency analysis or terpene analysis pursuant to NCCR 11.050, a cannabis independent testing laboratory shall test for and accurately quantify the presence of the following:

- (a) Cannabinoids:
  - (1) THC;
  - (2) Tetrahydrocannabinolic acid;
  - (3) CBD;
  - (4) Cannabidiolic acid; and
  - (5) Cannabinol; and
- (b) Terpenoids:
  - (1) Alpha-bisabolol;
  - (2) Alpha-humulene;
  - (3) Alpha-pinene;
  - (4) Terpinolene;
  - (5) Beta-caryophyllene;
  - (6) Beta-myrcene;
  - (7) Beta-pinene;
  - (8) Caryophyllene oxide;
  - (9) Limonene; and
  - (10) Linalool.

**11.060 Performance of testing to verify homogeneity of potency of edible cannabis products.**

1. Except as otherwise provided in subsection 2, a cannabis independent testing laboratory shall perform testing to verify the homogeneity of the potency of an edible cannabis product by testing multiple samples from a single production run.

2. A cannabis independent testing laboratory that tests an edible cannabis product which has previously had the homogeneity of the potency of the edible cannabis product verified by a cannabis independent testing laboratory and which has not undergone a change in recipe may verify the homogeneity of the edible cannabis product by testing one or more single units or servings from a production run of the edible cannabis product.

3. The cannabis independent testing laboratory will verify the homogeneity of the potency of the edible cannabis product only if:

- (a) The concentration of THC and weight of each sample is within 15 percent above or below the intended concentration of THC and weight; and
- (b) No combination of samples which comprise 10 percent or less of the cannabis product contain 20 percent or more of the total THC in the cannabis product.

**11.065 Use of approved pesticides by cannabis establishment; performance of pesticide residue analysis by testing laboratory.**

1. A cannabis establishment shall only use a pesticide in the cultivation or production of cannabis or cannabis products if the pesticide appears on the list of pesticides published by the State Department of Agriculture pursuant to NRS 586.550.

2. When performing pesticide residue analysis pursuant to NCCR 11.050, a cannabis independent testing laboratory shall analyze for the pesticides which occur on the list of pesticides published by the State Department of Agriculture pursuant to NRS 586.550 at the detection levels specified by the State Department of Agriculture and for any other substances required by the Board. If:

- (a) A pesticide which occurs on the list of pesticides published by the State Department of Agriculture pursuant to NRS 586.550 is detected at a level which exceeds the level specified by the State Department of Agriculture; or

(b) A pesticide which does not occur on the list of pesticides published by the State Department of Agriculture pursuant to NRS 586.550 is detected in any amount which is positively verified, the pesticide residue analysis is failed.

**11.070 Testing: Selection of representative samples and random samples; segregation period for entire lot; duties of testing laboratory; disposal of lot if sample fails test; release of lot if sample passes test; filing of electronic copy of certificate of analysis for tests performed by testing laboratory; grounds for disciplinary action for failure to comply.**

1. Immediately before packaging:

(a) Usable cannabis for sale to a cannabis sales facility, cannabis production facility or another cannabis cultivation facility, a cannabis cultivation facility shall segregate all harvested cannabis into homogenized lots of flower and trim, respectively, and allow a cannabis independent testing laboratory to select a homogenous representative sample for testing from each lot the cannabis cultivation facility has segregated. The cannabis testing laboratory which performs the test must collect the samples. If the cannabis cultivation facility has segregated the lot of harvested cannabis into packages or container sizes smaller than the entire lot, the cannabis cultivation facility must present all packages comprising the lot to the cannabis independent testing laboratory, and the testing laboratory must sample and test each package containing harvested cannabis from the lot.

(b) Concentrated cannabis or cannabis products, a cannabis production facility shall allow a cannabis independent testing laboratory to select a random sample from each lot or production run for testing by the cannabis independent testing laboratory. The cannabis independent testing laboratory performing the testing must collect the samples.

(c) The cannabis independent testing laboratory selecting a sample shall seal the sample within the package to ensure sample integrity. The sample shall be collected in a tamper resistant package or in a package that is sealed with tamper resistant tape immediately after the sample is placed in the package.

(d) The cannabis independent testing laboratory shall ensure the seed-to-sale identification tag is affixed to the sample package. The batch, lot or production run number and the weight or quantity of the sample shall be documented on the sample package and on the chain of custody.

2. A cannabis independent testing laboratory that collects a sample pursuant to this section shall test the sample as provided in NCCR 11.050.

3. From the time that a lot or production run has been homogenized for sample testing and eventual packaging and sale to a cannabis sales facility, cannabis production facility or, if applicable, another cannabis cultivation facility, the cannabis establishment which provided the sample shall segregate and withhold from use the entire lot or production run, except the samples that have been removed by the cannabis independent testing laboratory for testing, until the cannabis independent testing laboratory provides the certificate of analysis from its tests and analysis. During this period of segregation, the cannabis establishment which provided the sample shall maintain the lot or production run in a secure, clearly designated, cool and dry location so as to prevent the cannabis from becoming contaminated or losing its efficacy. Under no circumstances shall the cannabis establishment which provided the sample sell the cannabis or cannabis products, as applicable, to a cannabis sales facility, cannabis production facility or, if applicable, another cannabis cultivation facility before the time that the cannabis independent testing laboratory has completed its testing and analysis and provided the certificate of analysis to the cannabis establishment which provided the sample.

4. Except as otherwise provided in subsection 5, a cannabis independent testing laboratory shall immediately return or dispose of any sample received pursuant to this section upon the completion of any testing, use or research. If a cannabis independent testing laboratory disposes of a sample received pursuant to this section, the cannabis independent testing laboratory shall document the disposal of the sample using its seed-to-sale tracking system pursuant to NCCR 6.080 and 6.082.

5. A cannabis independent testing laboratory shall keep any sample which fails testing, or which is collected by the Board for confirmation testing for 30 days after failure or collection. A sample which is kept pursuant to this subsection must be stored in a manner approved by the appropriate Board Agent. A cannabis independent testing laboratory shall dispose of a sample kept pursuant to this subsection after 30 days have elapsed after failure or collection.

6. Except as otherwise provided in NCCR 11.075, if a sample provided to a cannabis independent testing laboratory pursuant to this section does not pass the testing required by NCCR 11.050, the cannabis establishment which provided the sample shall dispose of the entire lot or production run from which the sample was taken and document the disposal of the sample using its inventory control system pursuant to NCCR 6.080 and 6.082.

7. If a sample provided to a cannabis independent testing laboratory pursuant to this section passes the testing required by NCCR 11.050, the cannabis independent testing laboratory shall release the entire lot or production run for immediate manufacturing, packaging and labeling for sale to a cannabis sales facility, a cannabis production facility or, if applicable, another cannabis cultivation facility.

8. A cannabis establishment shall not use more than one cannabis independent testing laboratory to test the same lot or production run of cannabis without the approval of the appropriate Board Agent.

9. A cannabis independent testing laboratory shall file with the Board, in a manner prescribed by the Board, an electronic copy of the certificate of analysis for all tests performed by the cannabis independent testing laboratory, regardless of the outcome of the test, including all testing required by NCCR 11.050 to 11.065, inclusive, at the same time that it transmits those results to the facility which provided the sample.

10. An electronic mail message transmitted pursuant to subsection 9 must be formatted as follows:

(a) The subject line of the electronic mail message must be the name of the cannabis establishment from which the sample was collected.

(b) The name of the electronic file containing the certificate of analysis must be:

(1) Except as otherwise provided in subparagraph (2) or (3), the Facility ID assigned by the Board to the cannabis independent testing laboratory, followed by an underscore, followed by the four-digit identifier assigned by the Board to the cannabis establishment from which the sample was collected, followed by an underscore, followed by:

(I) If the sample was from a production run, the production run number; or

(II) If the sample was not from a production run, the batch number, followed by an underscore, followed by the lot number.

(2) If the certificate of analysis is from a retesting of a previously failed sample, an underscore followed by the word "Retest" must be appended to the end of the name of the electronic file.

(3) If the certificate of analysis has been amended, an underscore followed by the word "Amended" must be appended to the end of the name of the electronic file.

(c) If the certificate of analysis has been amended, the electronic copy of the certificate of analysis must state “Amended” in 20-point bold red font at the center of the top of the first page of the report and must contain a statement of the reason for the amendment that clearly and completely describes the change in 10-point font.

11. The Board will take immediate disciplinary action against any cannabis establishment which fails to comply with the provisions of this section or falsifies records related to this section, including, without limitation, revoking the license of the cannabis establishment.

12. A cannabis independent testing laboratory may subcontract its testing of cannabis or cannabis products only to another cannabis independent testing laboratory.

13. The Board may publish on their website all Certificates of Analysis issued to them in the preceding time.

(Amended: 10/2023)

**11.075 Testing: Authorized use of cannabis upon failure of microbial screening; automatic failure to pass; request for retest; retest for pesticide residue must be performed by State Department of Agriculture; effect of passing or failing retest.**

1. Upon approval of the appropriate Board Agent, a lot or production run of cannabis that fails a residual solvents, pH, water activity (aw), homogeneity, or microbial screening test may be remediated or used to make an extract. After processing, the remediated lot or extract must pass all required quality assurance tests.

2. If a sample from a cannabis production facility fails a quality assurance test, the entire production run from which the sample was taken automatically fails the quality assurance test.

3. At the request of a cannabis cultivation facility or a cannabis production facility, the appropriate Board Agent may, on a case-by-case basis, authorize a retest to validate the results of a failed test. The cannabis cultivation facility or cannabis production facility is responsible for all costs involved in a retest performed pursuant to this section.

4. A cannabis cultivation facility or a cannabis production facility may not request a retest pursuant to this section if the lot or production run has undergone any type of remediation since the time samples were initially taken for testing.

5. A cannabis cultivation facility or a cannabis production facility shall submit a request for retesting to the appropriate Board Agent in writing and on a form designated by the Board.

6. If the appropriate Board Agent grants a request for retesting, the Board Agent will select the cannabis independent testing laboratory that will perform the retest.

7. Except as otherwise provided in this subsection, a cannabis cultivation facility or a cannabis production facility may submit a request for retesting of not more than 50 lots or production runs each calendar year. For any subsequent failure of a quality assurance test in a calendar year, the facility shall request permission from the Board for an additional 50 tests, destroy the lot or the entire production run, or request to send the lot or production run to extraction or remediation. The Board may extend authority to the Executive Director of the CCB to approve such requests. If the additional 50 retests are approved, a cannabis cultivation facility or a cannabis production facility must obtain the results of two retests in the category which failed, from two different cannabis independent testing laboratories. For the retested lot or production run to be approved for sale, both retests must provide passing results. If both retests provide passing results, the certificate of analysis with the higher quantifiable results will be recorded. If it is not clear which certificate has higher results, the appropriate board agent will select the one to be recorded. No more than one such request for additional tests is permitted within a calendar year. A lot which only fails a quality assurance test for moisture content must not be counted for the purpose of this subsection.



- (a) To request permission from the Board for an additional 50 tests, a cannabis cultivation facility or a cannabis production facility must file a petition with the Board which must include the following:
- (1) Request for the additional 50 tests;
  - (2) List the prior 50 lots or production runs that failed, what they failed for, and which cannabis independent testing laboratory performed the test; and
  - (3) List whether the prior 50 lots or production runs passed pursuant to a retest, and which cannabis independent testing laboratories performed the retests.
8. A failed quality assurance test for pesticide residue must be retested by the State Department of Agriculture unless otherwise approved by the Board or appropriate Board Agent.
9. If a sample passes the same quality assurance test upon retesting, the cannabis cultivation facility or cannabis production facility need not destroy the lot or production run and may sell the lot or production run to a cannabis cultivation facility, cannabis sales facility or cannabis production facility, as applicable.
10. If a sample fails the same quality assurance test upon retesting, the Board Agent denies a request for retesting or a cannabis cultivation facility or a cannabis production facility does not request retesting after a sample fails a quality assurance test, the facility shall destroy the entire lot or production run from which the sample was taken.

(Amended: 8/2021)

**11.080 Collection and testing of random samples from cannabis establishments for comparison with results reported by testing facilities.** At the request of the Board, a testing laboratory chosen by the Board may collect and test random samples from cannabis establishments and compare the results of its testing to the results reported by cannabis testing facilities.

**11.085 Random quality assurance compliance checks; costs for screening or testing.**

1. Upon the request of the Board, a cannabis facility must provide a cannabis independent testing laboratory designated by the Board with a sample of cannabis or a cannabis product in an amount determined by the cannabis independent testing laboratory to be sufficient for random quality assurance compliance checks in a secure manner such that the cannabis independent testing laboratory can confirm that it has received and is testing the correct sample.
2. The cannabis independent testing laboratory that receives a sample pursuant to subsection 1 shall, as directed by the Board:
  - (a) Screen the sample for pesticides, chemical residues, herbicides, growth regulators and unsafe levels of metals;
  - (b) Perform any other quality assurance test deemed necessary by the Board; and
  - (c) Report its results to the Board.
3. The cannabis cultivation facility or cannabis production facility is responsible for all costs involved in screening or testing performed pursuant to this section.