Sampling Procedure for Medical Marijuana Flower, Concentrate and Edible Samples	
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Standard Operating procedures

Sampling for Medical Marijuana Flower, Concentrate and Edible Samples

Date	Name	Revision
09/2020	Sabrina Farias	Created
03/2021	Sabrina Farias	Detailed decontamination steps
06/2021	Sabrina Farias	Revised laboratory sample requirement amount
11/2021	Sabrina Farias	Updated to comply with current OMMA Regulations
03/2022	Sabrina Farias	Sample testing amount updated

Purpose:

This procedure describes Oklahoma Medical Marijuana Authority requirements for cannabis flower, concentrate and edible samples for full compliance testing. Laboratory analysis relies on sample technique and sample size that can appropriately characterize the sampling batch. The process of taking a representative sample is the beginning of laboratory analysis.

To reliably provide the laboratory with a representative sample, standard sampling methods must be applied with consistency. In addition, sampling practices and devices must be appropriate for the matrix. A certain amount of random error is intrinsic to all measurements and may be minimized by close adherence to well documented standard procedures.

This procedure will focus on recommended sampling practices and sampling devices.

Representative sampling

When Sampling a batch, the sampler shall check for any signs of non-uniformity, non-uniformity could be a sign of a misrepresented batch.

- An example of this is a batch of twenty milligram red gummies and a batch of fifty milligram blue gummies, each consist of a different potency. If blue gummies are seen in the red gummy batch it is a non-uniformity, Sampling from this non-uniformed batch could lead to a misrepresented laboratory report.

Some obvious indicators of non-uniformity may be difference types or sizes of containers, variations in marks and labels, or mixed batch numbers. During sampling, the sampler shall look for differences in the usable marijuana being sampled such as color, shape, size and treatment. The batch must be uniform for all factors that appear on the label; hence, variations in the product may indicate nonuniformity in the batch and that any sample drawn may not be representative for testing. The sampler shall note these anomalies in the sample collection report.

General procedural guidelines that apply to all sampling:

1. Gaining access to the entire batch;
2. Use of appropriate sampling equipment and consistently following procedures;
3. Taking equal portions for each sample increment;
4. Randomly or systematically taking sample increments throughout the batch;
5. Obtaining a minimum number of sample increments, which will be based on batch size; and
6. Recording all observations and procedures used while collecting the sample increments on an appropriate sampling form.

Random Sampling:

Sample increments should be randomly selected from <u>different locations</u> within a container or set of containers.

Equipment and supplies:

- Sampling equipment such as spoons, spatulas, forceps, tongs, corers, transfer pipettes, or other matrix specific tools
- Containers (amber glass jars, mylar bags, etc)
- Kim-wipes, or equivalent
- Field balance (Capable of 0.1 g measurements)
- Custody Seals/Sample Labels

- Flower Cleaning supplies – 10% Bleach and ~70% Isopropyl alcohol (IPA)
  700mL of 99%-100% Isopropyl alcohol + 300mL Water = 70% IPA

  900mL water + 100mL Bleach = 10% Bleach Mix

- Gloves (powder-free, nitrile, sterile)
- Disposable/washable coveralls, lab coat or apron
- Filtering dust mask
- Safety goggles
- Hair net
- Sample Cooler/Ice (if thermal preservation is required)
- Field Log/Permanent Ink

Sampling Records and Field Data:

Sampling records must include the following:

- Laboratory's name, address, and license number
- Sampler's name, title, and the names of assisting samplers
- Date and time of sampling started and ended
- Grower's or processor's company name, address, and license number
- Batch number
- Sample matrix (Flower, Concentrate or Edible)
- Total batch siz
- Total weight or unit count of the primary sample
- Total weight or unit count of the reserve sample
- Sampling conditions, including temperature

Chain of Custody

- Sampler's Name
- Grower/Processor license number
- Sample identification (lab LIMS ID) if assigned before arrival at laboratory
- Sampling date/time
- Sample name or LIMS ID on sample containers
- Final mass of each sample
- Custody transfer signatures
- Custody transfer dates/times

Procedure for sampling usable marijuana product:

1. Locate the batch to be sampled.
2. Review the container label information for harvest lot number, producer, and other pertinent information. Each harvest lot must be separated into their required batch amounts and given a unique identifier (metrc tag, assigned batch number or ID)
3. Determine the number of containers in the batch and the batch size. Visually verify the batch size for each container.
4. Select the appropriate sampling tool to ensure that it reaches all portions of the container.
5. Disposable/washable coveralls, lab coat or apron should be worn. Disposable, powder-free nitrile gloves, and hair net should be worn for the entire sampling process to prevent contamination.

6. Sampling tools and equipment must be sanitized prior to use to prevent cross- contamination of sample. Sampling tools and equipment must be sanitized between each batch or use disposable sampling tools.
    a. *Note: Samplers must take extreme care if sampling from multiple sites in one day to ensure contaminants, pathogens, or organisms are not transferred between facilities. You may decontaminate by using a 10% bleach and 70% Isopropanol technique as described below;*

    b. With appropriate PPE Spray 10% bleach on a paper towel and wipe down the entire surface(s) of sample tools to be used. After these tools have been wiped down with 10% bleach, spray a different set of paper towels with a 70% Isopropyl alcohol mixture and wipe tools down again. **If you are getting samples tested for residual solvents, use bleach mixture and water only, do not use 70% IPA.** The Isopropanol mixture removes the bleach residue and completes the most effective routine to remediate or prevent a contamination problem during sampling.
7. Gloves must be changed between each batch.
8. Visually inspect each test sample increment to assess uniformity;
9. If non-uniformity is identified, record observation in the sampling report. It is expected with usable marijuana to have variable sizes of flower. When drawing sample increments, approximately equal amounts of product are to be taken with each sampling attempt and from each container. Care must be taken by the sampler to not damage the portion of the product which is not being collected.
10. Combine all sample increments to form the Test Sample, complete the same procedure with a second set of equivalent sample increments to form the Reserve Sample.
11. Ensure enough sample increments are taken to meet sample size requirements for all analytical method(s) being performed.
12. Label the primary and reserve test sample with the following:
    a. Sampling date
    b. Harvest lot and batch numbers
    c. Any other unique identifier to link sample to batch
13. Forward the sample and sampling report to the laboratory.

Sample Collection and Storage:

Samples

- Are collected/received in sealed glass jars, sealed plastic containers or Ziploc bags. It is recommended to store samples in glass jars.

Flower

- Received on ice or at room temperature. Once logged in, the sample will be stored in a freezer awaiting laboratory homogenization and extraction. After the extraction process is completed, the sample is stored according to its recommended storage instructions.

Concentrate

- Received on ice or at room temperature. Upon arrival, samples are stored at ambient temperature to allow easy homogenization, sampling and laboratory extraction. After the extraction process is complete the sample is stored according to its recommended storage instructions.

Edibles/Topicals

- Received on ice or at room temperature. Samples are stored at ambient temperature to allow easy homogenization, sampling and laboratory extraction. After the extraction process is complete the sample is stored according to its recommended storage instructions.

Transporting

- Ensure your samples are in package appropriate containers to help keep the samples integrity during transportation.
- Protect the sample from moisture and temperature extremes.
- Include all documents with the sample
    1. Sampling document
    2. Transport manifest
    3. Chain of custody (or all info for the chain of custody)
        - Name of client/company
        - Address
        - License number
        - Email
        - Phone number
        - Sample batch numbers and strains

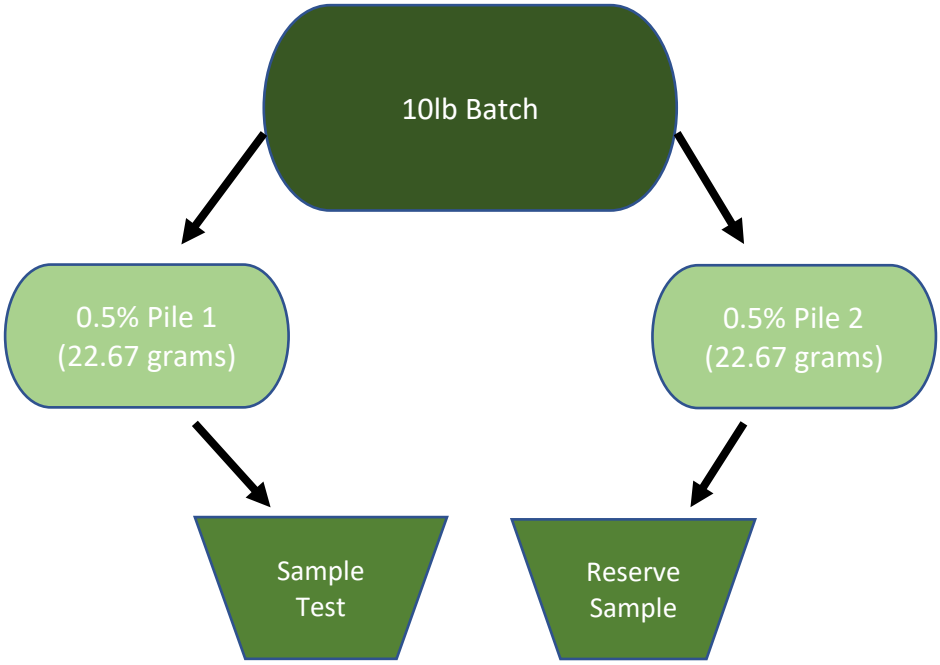
Reserve Sample

The Reserve Sample is for quality assurance only. In the case of an investigation, re-extraction or rerun, the reserve sample would be used unless remediation is necessary for the entire batch. Remediation may be attempted for micro, water activity, moisture content and residual solvents. The reserve sample will be held by the testing laboratory for 30 days. After that point you may collect the remaining reserve sample by contacting Delta9 Labs.

Sampling a batch

Using a 10lb batch as an example:

1. Weigh your batch, ensure it is 10 pounds or less.
2. Randomly sample **0.5% (22.67 grams)** of your batch, twice.
3. Put into separate piles away from your starter pile (the initial 10 pound batch).
4. Within those two separate **0.5% pile (22.67 grams each pile),** sample the needed amount from one pile and label it **"Test Sample".**
5. Sample the needed amount from the second pile and label it **"Reserve Sample".**
6. If the containers need to be handled in a specific manner, please let the analyst or the transporter know so we can ensure the integrity of your sample is kept intact.



Appendix 1 – Sampling Guidelines

Sample size

Delta9 Labs requires no less than 5 grams for a Sample Test along with an additional 5 grams for a Reserve Sample Test.

- This applies to Flower, Kief, Hash, Pre-Rolls and Moon Rocks.
- This sample amount ensures that enough sample is in-house to perform your initial full compliance test. If a second round of testing is required by Delta9 Labs or OMMA.

Delta9 Labs requires no less than 4 grams for a Sample Test along with an additional 4 grams for a Reserve Sample Test.

- This applies to Concentrates, Distillates, Isolates, Live Rosin, vape carts etc.
- This sample amount ensures that enough sample is in-house to perform your initial full compliance test. If a second round of testing is required by Delta9 Labs or OMMA.

The sample size must be enough to complete your requested test but cannot be less than 0.5% of the weight of the batch for a full complaint test. The required sample size for a given batch size varies depending upon the size of the batch. You may reference OMMA regulations for perspective batch sizes.

Sample Matrix Guidelines for Full Compliance Testing

Matrix	**Batch Size**	**Batch number** (Example)	**Sample Test Weight**	**Reserve Sample Weight**
Example: Flower, Hash, Kief and Moon Rocks	Reference OMMA Regulation: 310: 681-8-1	AK10252020-01 Or (Partial Batch Numbers from attached manifest)	5 grams	5 grams
Example: Concentrate, Distillate, Live Rosin, Vape Carts	Referenced OMMA Regulation: 310: 681-8-1	BD11082020-01 Or (Partial Batch Numbers from attached manifest)	4 grams	4 grams
Example: Edibles and Topicals	1,000 Grams (Max)	BN11232020-01 Or (Partial Batch Numbers from attached manifest)	Two (2) ready to sell units	One (1) ready to sell unit

** Distillates, Concentrates, Vape Carts, Live Rosins, Topicals and Edibles are required to undergo residual solvent testing to be within compliance. Unless the concentrate has been tested previously for residual solvents.