

Exhibit A: Sampling Protocol

Industrial Hemp Pre-Harvest Testing

To be sufficient to meet the requirement for pre-harvest THC sampling and testing under OAR Chapter 603, Division 48, all sampling must be conducted as described in this Protocol.

A. General Sampling Requirements

1. Sampling may only be performed by the Department or a laboratory licensed by the Oregon Liquor Control Commission (OLCC) under ORS 475B.560 and accredited by the Oregon Health Authority (OHA) pursuant to ORS 475B.565 [hereinafter, Laboratory].¹
2. All sampling must be performed by personnel employed by a Laboratory and in accordance with OAR 603-048-0600 and this Protocol. All sampling must be performed by laboratory personnel who have completed sampling training with the Department.
3. Laboratory must follow chain of custody procedures consistent with TNI EL Standard VIM2 5.7 and 5.8 and be documented to record the collection, transport, and receipt of samples by the Department or laboratory. Laboratory must maintain records for each harvest lot as identified by harvest lot identifier.
4. Sampling must produce a representative sample of the harvest lot.
5. Laboratory must avoid contamination of the non-sampled material with sample containers that are free of analytes of interest and appropriate for the analyses requested.
6. Laboratory shall only sample plants with flowers when a purpose of the harvest lot is to produce flower. If no flowering plants are present, the Laboratory shall reschedule the sampling for a later date when flowering plants are present.
7. Laboratory must obtain a sufficient sample size to provide sufficient material to conduct all requested tests, any requested retest, and any quality control performed by the testing laboratory.

B. Initiating a Sampling Request

1. The Laboratory must receive a complete Industrial Hemp Sampling and Testing Request Form prior to sampling. The Laboratory must receive a new and separate “Harvest Lot Sampling Request Description” for each “Harvest Lot” to be sampled.
2. Laboratory must complete the Industrial Hemp On-Site Sampling Form. Laboratory must complete a new and separate “Harvest Lot On-Site Sampling Description” for each Harvest Lot to be sampled.
3. A “Harvest Lot” means:
 - a. Means a quantity of industrial hemp harvested within a distinct timeframe that is:
 - i. Grown in one contiguous production area within a grow site; or
 - ii. Grown in a portion or portions of one contiguous production area within a grow site.
 - b. Does not include a quantity of industrial hemp comprised of industrial hemp grown in noncontiguous fields or noncontiguous growing areas.

¹ Note that the sampling of industrial hemp for pre-harvest THC concentration itself is not accredited by OHA.

4. Prior to beginning the sampling procedure, the Laboratory shall survey the site to identify the conditions to determine the appropriate sampling procedure as described in this Protocol.

C. Survey and sample collection - Normal Field Conditions

1. The sample pattern must ensure that all parts of the field are adequately and proportionately represented in the plants inspected and sampled.
2. The sampler must use a sawtooth pattern when sampling the field. Two (2) sawtooth patterns are provided below. The approved sampler must choose one of the patterns most suitable for the field to be sampled. (Figure 1 and 2). The sampler must sample according to the pattern to the extent possible but may deviate from the pattern as necessary to account for particular field conditions and to ensure that all parts of the field are adequately and proportionately sampled to produce a representative sample.
 - a. A sample shall be obtained from flowering tops when flowering tops are present, and shall be approximately 8 inches in length.² Samplers should avoid sampling dead, diseased, or mechanically injured plants.
 - b. A sample shall consist of no more than one sample per plant, randomly chosen from the harvest lot. Place each sample in a paper bag.
 - c. Since they are a measure of the entire harvest lot, all samples from the harvest lot may be collected into a single bag.
3. Each composite sample should consist of a maximum 30 plant heads of about 8 inches.
4. For small fields or when sampling from a known number of plants, the Hypergeometric Table below should be used.
5. **In no case shall the sample size be less than 4 ounces, which is the minimum amount necessary for laboratory tests and file samples.**

² See note on harvest lots intended for flower production in the General Sampling Requirements.

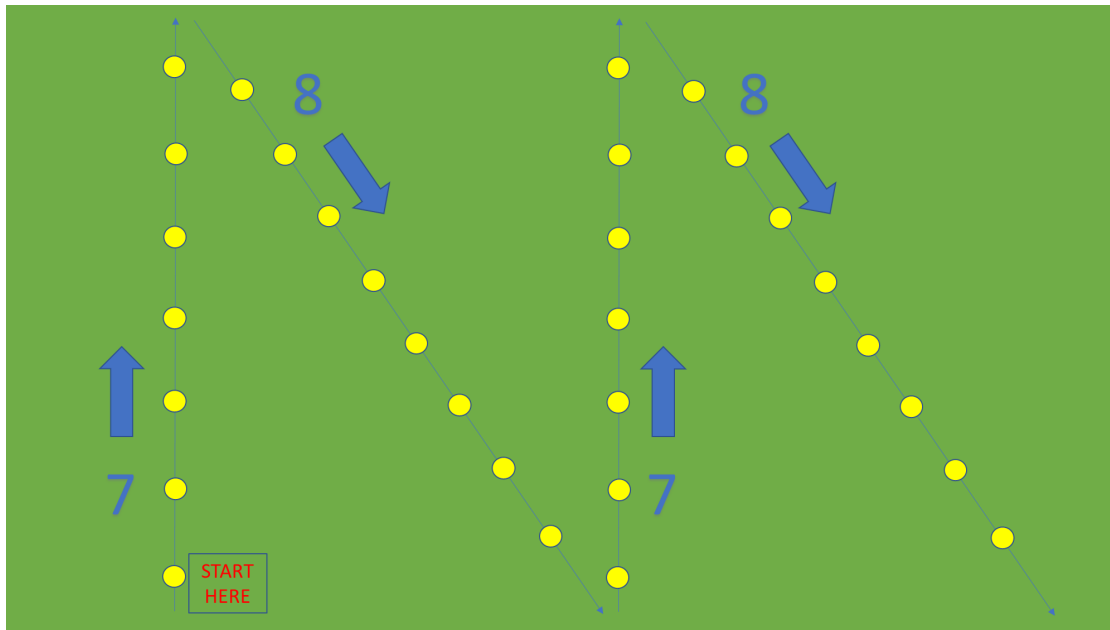


Figure 1. This is a typical sawtooth survey pattern starting in the lower “left” corner of the field. The yellow dots indicate the approximate locations to collect samples.

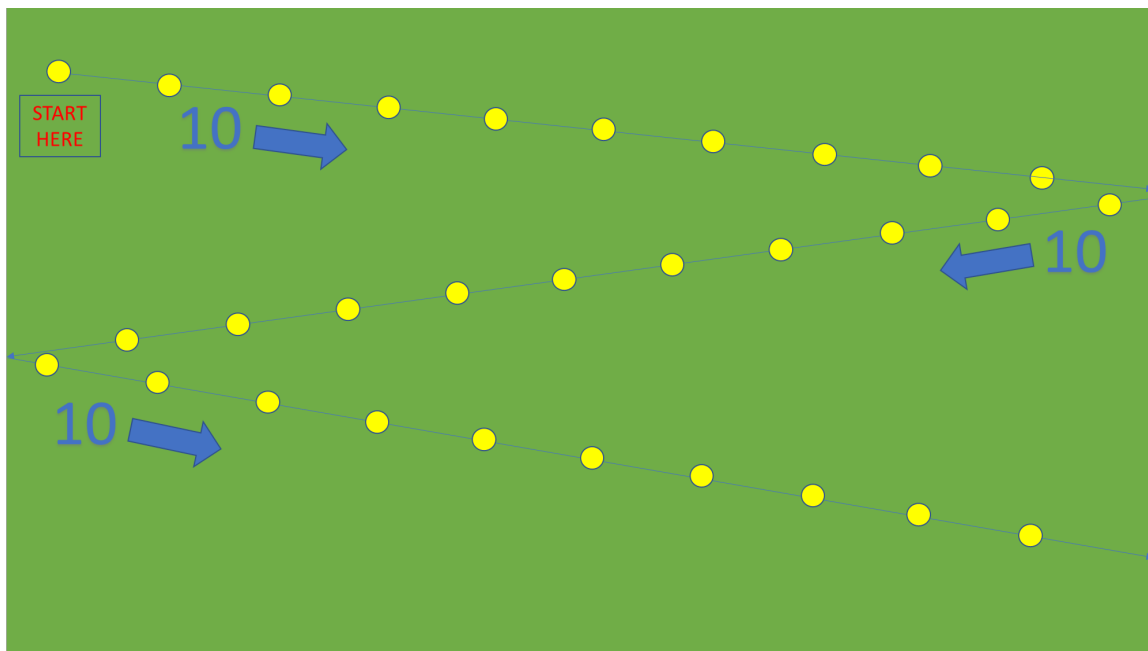


Figure 2. This is another typical sawtooth survey pattern starting in the top “left” corner of the field. The yellow dots indicate the approximate locations to collect samples.

D. Greenhouses and small fields

For greenhouses and small fields, fewer individual plants may be sampled as indicated in the below Hypergeometric Table. **Note: A total composite sample must be at least four ounces.**

Sampler shall employ one of the above sample patterns.

Hypergeometric Table for Random Sampling

Total number of plants:	Randomly select this number of plants to sample:
1-13	Sample all plants
14-15	13
16-17	14
18-19	15
20-22	16
23-25	17
26-28	18
29-32	19
33-38	20
39-44	21
45-53	22
54-65	23
66-82	24
83-108	25
109-157	26
158-271	27
272-885	28
886-200,000	29

E. Reporting and Recordkeeping Requirements

1. The Laboratory shall record data for all samples collected on the appropriate forms for sample collection. All records must clearly identify the harvest lots by harvest lot identifier.
2. The Laboratory shall submit a copy of the following forms for each Harvest Lot with the samples when submitting for testing.
 - a. Industrial Hemp Sampling and Testing Request Form
 - b. Industrial Hemp On-Site Sampling Form
3. The Laboratory shall maintain standard operating procedures (SOP) that accurately reflect current sampling procedures.
 - a. The SOP shall be readily accessible to all pertinent personnel and provided to ODA upon request.
 - b. The SOP shall clearly indicate the effective date of the document, the revision number, and the signature of the approving authority.
 - c. The sampling SOP shall use these protocols as minimum requirements and must include additional detail specific to laboratory procedures. Any changes, including use of a selected option, shall be documented and included on the sampling form. In cases where the published method has been modified or where the referenced method is ambiguous or provides insufficient detail, these changes or clarifications shall be clearly described.
 - d. All documents shall be controlled and retained in accordance with the TNI Environmental Laboratory standard as defined in 333-007-0310.
4. When procuring the sample, the Laboratory must create a Chain of Custody form with the information set out below. All sampling report forms must be signed by the sampler.
 - a. Sampler's name

- b. Lab License Number
 - c. Field ID/Name and Harvest Lot Identifier
 - d. Sampling Date/Time
 - e. Custody transfer signatures
 - f. Custody Transfer Dates/Times
5. The Laboratory shall provide to ODA upon request any and all records associated with the sampling, including SOPs, chain of custody forms, quality checks, etc.

F. Preparation of the Composite Sample

1. The Laboratory shall close the paper bag for collection and seal in a manner to show evidence of tampering. On the sample bag, record Field Name and the harvest lot identifier, date of sampling, sampler's signature, registered business or grower name.
2. The Laboratory must have detailed procedures on maintaining custody and sample integrity during transport. These procedures should take into consideration controlling temperature and other environmental factors.
3. Composite samples must always be identified by labeling or marking the sample container to associate them with the harvest lot from which they originated.
4. The Laboratory must submit the composite sample to the testing laboratory in its entirety.
5. The Laboratory shall submit a copy of all of the following forms with the samples when submitting for testing:
 - a. Industrial Hemp Sampling and Testing Request Form - Completed by grower;
 - b. Industrial Hemp On-Site Sampling Form- Completed by Laboratory

G. Equipment and supplies

1. Forms (including extra sample request forms)
2. Paper bags for samples;
3. Permanent pens for marking on paper sample bags;
4. Pruning shears for collecting foliar samples;
5. Single-use Coveralls;
6. Gloves, disposable;
7. Boots or booties (waterproof recommended);
8. Rain gear (recommended);
9. Boxes for storing sample equipment and samples;
10. Bleach, 10% solution or other acceptable surface disinfectant for cleaning tools or boots between fields;
11. Clipboard;
12. Clicker to count the number of samples collected (optional).

H. Sanitation

1. Park vehicle on pavement or on designated roads within the field.
2. Clean collection tools with an appropriate disinfectant after finishing all sample collections within the field.
3. Dispose of coveralls and gloves in an appropriate receptacle before leaving the field or in a designated receptacle in the vehicle. Ensure that single-use coveralls are appropriately cleaned prior to next use and are not contaminated by used coveralls.
4. Field sampling equipment must be certified clean prior to use by the laboratory.

I. Resampling

1. A Laboratory may resample a Harvest Lot upon receipt of a completed Sampling and Testing Request Form from a grower that indicates the request is for “Remediation Resampling.”
2. A Laboratory shall conduct any such resampling in accordance with all applicable rules and this protocol.

References

USDA APHIS National Seed Health Service. 2001. Reference manual B: Seed health testing and phytosanitary field inspection methods manual. Version dated 2/27/2001, USDA APHIS NSHS, Beltsville, MD, 56 pp.

http://www.aphis.usda.gov/import_export/plants/plant_exports/national_seed_health_system.shtml

OAR Chapter 603, Division 48