

## **Pennsylvania Hemp Program Requirements for Hemp Sample Compliance Testing**

According to the 2018 Farm Bill, the USDA final rule and the 2021 PA Hemp Controlled Plant General Permit, all hemp variety lots grown must be sampled and tested to determine THC concentration levels. Hemp variety lots shall be sampled by a PA Department of Agriculture-certified sampling agent and tested by a laboratory which shall be “an independent laboratory approved by the Department and able to meet all requirements for testing and reporting outlined in Article IV...” [PA Hemp Controlled Plant General Permit, Article IV.(e)(1)] The following excerpt from the 2021 PA Hemp Controlled Plant General Permit describes the Laboratory testing and methods which are acceptable to be utilized by Hemp Growing Permittees for official clearance of hemp plants planted in Pennsylvania.

### **PA Hemp Controlled Plant General Permit, Article IV.(e):**

(e) *THC Testing Laboratory Standards and Methods.* All the following shall comprise the rules and requirements for THC testing.

(1) Testing shall be done at the Department laboratory or an independent laboratory approved by the Department and able to meet all requirements for testing and reporting outlined in Article IV sections (e) and (f). The Department’s approval process for laboratories will be published on the Department’s Hemp Program webpage:  
[https://www.agriculture.pa.gov/Plants\\_Land\\_Water/industrial\\_hemp/Pages/default.aspx](https://www.agriculture.pa.gov/Plants_Land_Water/industrial_hemp/Pages/default.aspx).

(2) After December 31, 2022, only laboratories registered with the DEA will be approved to conduct testing under this section.

(3) Sample preparation shall include grinding of entire sample to ensure homogeneity of plant material prior to testing.

(4) Testing for THC will be conducted using post-decarboxylation or other similarly reliable method approved by the Department and by USDA where the THC concentration level measured includes the potential to convert tetrahydrocannabinolic acid (THCA) into THC. Testing methodologies currently meeting these requirements include those using gas or liquid chromatography with detection. The Department will provide additional instructions to laboratories on approved procedures via posting on the Department’s hemp website.

(5) Testing shall be done and reported on a dry weight basis, determined either through testing of dried samples or calculation using moisture content analysis of samples.

(6) The laboratory must report a Measurement of Uncertainty (MU) with each hemp test result. The laboratory must be able to provide documentation for derivation of the measurement of uncertainty if requested by the Department. Laboratories shall use appropriate, validated methods and procedures for all testing activities and evaluate measurement of uncertainty.

### **PA Department of Agriculture Approved Laboratories:**

PA Hemp Growing permittees must select a laboratory from the Department’s approved listing of laboratories (found on the PDA Hemp Program webpage: <http://agriculture.pa.gov/hemp>) to use for testing of official compliance samples. These laboratories were selected based on their answers to PDA’s laboratory survey.

## *Requirements for Hemp Sample Compliance Testing (continued)*

Laboratories wishing to be added to this listing can contact the PDA Hemp Program via [RA-AGPLHEMP@pa.gov](mailto:RA-AGPLHEMP@pa.gov) to request a survey.

To be approved by PDA, in addition to meeting standards of the General Permit, laboratories must indicate that they will follow sample retention and reporting requirements.

Sample Retention: laboratory must retain hemp samples for a minimum of two weeks after issuing test report to growers. This allows opportunity for growers to request a re-test of the sample.

### **Required Reporting of Hemp Sample Potency Results:**

1. The following information must be submitted to US Department of Agriculture, Agricultural Marketing Service, via [FarmBill.Hemp@usda.gov](mailto:FarmBill.Hemp@usda.gov):
  - a. Excel report for each sample received using the [Laboratory Test Results Report \(xlsx\)](#), located at <https://www.ams.usda.gov/rules-regulations/hemp/information-laboratories>.
2. The following information must be submitted to PA Department of Agriculture, via [RA-AGPLHEMP@pa.gov](mailto:RA-AGPLHEMP@pa.gov):
  - a. Copy of the PDA Chain of Custody form submitted with samples
  - b. Certificate of Analysis for each sample
  - c. Copy of Excel report submitted to USDA

### **Summary:**

The Department must receive results from laboratories which show the Total Potential THC% on a dry weight basis. This can be reported using the following methods:

- Gas Chromatography with Flame Ionization Detection resulting in a decarboxylated delta-9 THC.
- High Performance Liquid Chromatography showing delta-9 THC and THCa, which will result in a calculated Total THA.
- Testing of dried and ground samples to report dry-weight potency results.
- Testing of wet samples, ground and using moisture content analysis to calculate dry-weight potency results.

*(Other laboratory methods would need to be reviewed and approved by the Department prior to acceptance of potency analysis results.)*