

Soil, Water, and Tissue Testing for CBD Industrial Hemp Production

Resources to help you begin your search for the testing laboratory that may be best for you.



Most CBD hemp growers will want to test their soil, water, and plant tissue at some key points during the season. Soil, water, and plant nutritional tests can help determine what nutrients the plants will need to be provided and what fertilizers will be most appropriate. Tissue testing for phytochemicals such as CBD and THC are important to monitor your crop for quality and to anticipate harvest timing. Here, we have provided some resources to begin your search for the testing laboratory that may be best for you.

Some things to consider

- Test your water source and soil source for plant growth elements; Nitrogen, Phosphorus, Potassium, and micronutrients. This is important information so you can optimize plant growth of this high-value crop. Your crop may require feeding throughout its life cycle, and these needs may change depending upon growth stage.
- THC/CBD is an important test. Since industrial hemp may not exceed .3% THC, tracking the level of your crop may be critical as you approach harvest to prevent crop loss due to noncompliance. CBD levels may fluctuate during the season
- In Pennsylvania, a Certificate of Analysis (COA) will need to be provided to the PA Department of Agriculture to document delta-9 tetrahydrocannabinol concentration if your crop is not among those randomly tested by the Department.

- Many wholesale purchasers may also require a COA of your biomass which include tests for heavy metals and microbial contaminants.
- A terpene profile may be required by buyers of wholesale floral and bud material.
- Choose a lab that is ISO 17025 accredited

Helpful tips when submitting a sample

- Check with your chosen laboratory to understand how they would like to receive material. Laboratories may have differing requirements regarding quantity, plant parts, and moisture content of the samples they can receive and process.
- Include a copy of your state hemp growing permit with your sample. Place this in a ziplock bag to protect from moisture in shipping.
- USPS allows hemp plant parts to be mailed if these products comply with local laws and compliance records are maintained. Private delivery services may have policies prohibiting the shipment of hemp plant material. If not using USPS, be sure to check with your delivery service before attempting to ship your sample

Testing Labs for CBD and THC

Analytical 360 2735 1st Ave S. Seattle, WA 98134
206-577-6998

Botanacor Laboratories 1001 S. Galapago St. Denver, CO
80223 888-800-8223

Brookside Laboratories 200 White Mountain Dr. New
Bremen, OH 45869 419-977-2766

Keystone State Testing 4949 Queen Ave, Suite #104
Harrisburg, PA 17109 717-585-0393

Lancaster DHIA/Rock River Labs 1592 Old Line Road
Manheim, PA 17545-8222 1-888-202-3442

Rock River Laboratory PO Box 169 Watertown, WI 53094
920-261-0446

New Bloom Labs 5613 Tennessee Ave, Suite 201
Chattanooga, TN 37409 865-740-0213

PHR Labs 2020 Downyflake Lane, Suite 301 Allentown, PA
18103 215-220-9981



PennState Extension

Steep Hill 9691 Gerwig Lane, Suite A Columbia, MD 21046
410-881-7479

[Trichome Analytical](#) 6000 Commerce Parkway, Suite I Mt
Laurel, NJ 08054 856-316-0600

[US Cannalytics, Inc.](#) 3535 High Point Blvd., Suite 400
Bethlehem, PA 18017 610-798-6040

[Pinnacle CT, Inc.](#) 57 Aileron Court - Suite 15 Westminster,
MD 21157 410-231-7900 info@pinnaclelabs.com

[True Northwest, Inc.](#) 4139 Libby Road Northeast Olympia,
WA 98506 360-352-8688 info@tnwlab.com

Budding Analytical Laboratory, LLC 5368 Kuhl Rd., Erie, PA
16510 Matthew Heidecker, Ph.D., 814-969-0054

ACT Laboratories of Pennsylvania LLC 190 River Street,
Clearfield, PA 16830 109 Brinton Avenue, Trafford, PA
15085 Jeff Nemeth, 517-278-9333 x1

Testing Labs for Nutritional samples (water, tissue, soil)

Penn State Ag Analytical Services Lab 111 Ag Analytical
Svcs Lab University Park, PA 16802 814-863-0841

Brookside Laboratories 200 White Mountain Dr. New Bremen,
OH 45869 419-977-2766

Logan Labs 620 North Main Street Lakeview, OH 43331
937-842-6100

Spectrum Analytic 1087 Jamison Rd NW Washington Court
House, OH 43160 800-321-1562

Waypoint Analytical 280 Newport Rd Leola, PA 17540
717-656-9326

Disclaimers

This information is provided only as a guide. It is the permit holder's responsibility to understand and comply with all federal and Pennsylvania policy. Reference in this publication to any specific laboratory is for general information only, and does not constitute an endorsement or recommendation by Penn State. This is not an exhaustive list of laboratories. List is subject to change as authors become aware of new information.

The University is committed to equal access to programs, facilities, admission and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University's educational mission, and will not be tolerated. Direct all inquiries

regarding the nondiscrimination policy to the Affirmative Action Office, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901, aao@psu.edu, or 814-863-0471.

Authors

Krystal Snyder

Extension Educator, Horticulture
kls6590@psu.edu
610-746-1970

Alyssa Collins, Ph.D.

Associate Research Professor
aac18@psu.edu
717-653-4728

extension.psu.edu

Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Extension is implied.

This publication is available in alternative media on request.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status.

© The Pennsylvania State University 2020

Code: ART-5963