



## **PROFICIENCY TESTING GUIDANCE DOCUMENT**

**July 2024**

### **Overview**

Proficiency testing (PT) requirements are set forth in [Part 130 of Title 9 of New York Codes, Rules and Regulations \(Part 130\)](#). Laboratories must maintain compliance with these requirements. The purpose of this document is to summarize the requirements for proficiency testing.

Laboratories will need to maintain the Office of Cannabis Management's (Office) approval to test a given analyte or group of analytes. To maintain Office approval for a given analyte or group of analytes on its permit, a cannabis laboratory shall attain satisfactory performance in at least two (2) of three (3) consecutive scheduled or unscheduled or supplemental proficiency test in which it has participated in an eighteen (18) month period.

Some of the laboratories may wish to expand their scope of testing on its permit. To obtain approval for a given analyte or group of analytes on its permit, a cannabis laboratory shall pass two (2) consecutive scheduled or unscheduled or supplemental proficiency tests. A cannabis laboratory may continue to attempt to obtain satisfactory performances beyond two (2) proficiency tests if the two (2) consecutive satisfactory performances are not obtained.

An unscheduled or supplemental proficiency test shall be at minimum seven (7) days from the close date of the prior scheduled or unscheduled proficiency test. An unscheduled proficiency test may also be a supplemental proficiency test that was unscheduled.

To maintain approval for a given analyte or group of analytes, at least one (1) of the satisfactory proficiency tests in which a cannabis laboratory has participated in an eighteen (18) month period must be less than six (6) months old.

### **General Guidance**

- Unless otherwise specified in the instructions from the proficiency testing provider, laboratories shall conduct PT activities in accordance with their normal testing and reporting procedures.
- Laboratories shall ensure that PT samples are equally distributed among trained and qualified personnel for the relevant scope of testing on its permit.
- Approval is based on a given analyte or group of analytes.
  - If a laboratory is approved to use more than one method to test for a given analyte or group of analytes, each method must be challenged with a PT. This standard can be met by alternating which method is challenged between the 2 consecutive studies conducted each year. Alternatively and if available by the PT provider or supplier, a laboratory can work with them to create an additional record for your laboratory to enter the additional values (e.g., one result by method A, one result by method B).



- If a laboratory has more than one test instrument in use for compliance testing by an approved method, each instrument must be challenged with a PT. This standard can be met by alternating which test instrument is challenged between the 2 consecutive studies conducted each year (i.e., 2 test instruments) or among the 3 consecutive studies conducted within an 18-month period (i.e., 3 test instruments). If the laboratory has more than 4 test instruments for compliance testing setup a PT schedule over a course of 18-month period, ensuring all instruments have been challenged using a PT.

### List of Approved ISO/IEC 17043 Proficiency Tests

A list of ISO/IEC 17043 accredited proficiency test providers (PTP) and the analytes to be proficiency tested are included below. The Office has limited the matrices to hemp or hemp oil for the given analyte or group of analytes. The list is presented in two ways – 1) by PTP, and 2) by analyte or group of analytes.

Unless otherwise approved by the Office in writing, a laboratory must meet the requirements of Part 130. If a laboratory seeks to receive Office approval to deviate from the criteria noted above, the laboratory must show the PTP and PT samples are equivalent or better.

#### [Absolute Standards Inc:](#)

Absolute Standards is a PT provider accredited to ISO/IEC 17043, and it is also an ISO/IEC 17025 accredited laboratory.

- Percent Moisture in Hemp Bud/Oil PT (55237/55248)
- Water Activity: Water Activity (Humidity) in Hemp Bud/Oil (55246/55245)
- Mycotoxin: Aflatoxin & Ochratoxin PT in Hemp Bud/Oil (38498/38499)
- Terpenes: Terpenes in Hemp Bud/Oil (38516/38448)
- Heavy Metals: MI Heavy Metals on Hemp/Hemp Oil PT (55251/55252)
- Potency: Total THC in Hemp Bud/Oil (38711/38712)
- Pesticides: Florida Pesticide PT in Hemp Bud/Oil (38513/38514)
- Solvents: Residual Solvents PT in Hemp Oil/California Residual Solvents PT in Hemp Oil (38651/38462)

#### [Cole Parmer:](#)

Cole Parmer is a PT supplier who sells PT samples from NSI Lab Solutions, which is accredited to both ISO/IEC 17025 and ISO/IEC 17043.

- Filth and Foreign Materials: Qualitative Filth/Extraneous Metals in Hemp PT/Blind (EW-61203-70/96)
- Aspergillus: Qualitative Aspergillus Molds in Hemp PT/Express, Qualitative Aspergillus Molds in Oil PT/Express (EW-05000-52/53/56/57)
- Salmonella: Qualitative Salmonella in Hemp PT, Qualitative Salmonella in Oil PT/Express (EW-05000-76/80/77/81)
- STEC: Qualitative STEC in Hemp PT, Qualitative STEC in Oil PT/Express (EW-05000-85/86/89/90)
- TAC: Quantitative APC/TVC in Hemp PT/Express (EW-05000-94/95)



- TYM: Quantitative Yeast/Mold in Hemp PT/Express (EW-05001-45/44)
- Moisture: Quantitative Moisture in Hemp PT/Express (EW-61202-25/EW-61204-39)
- Water Activity: Quantitative Water Activity in Oil PT/Express, Quantitative Water Activity in Hemp PT/Express (EW-61203-23/43, EW-61204-66/71)
- Mycotoxin: Quantitative Mycotoxins in Oil PT/Express, Quantitative Mycotoxins (EW-61204-55/59, EW-61203-26/68)
- Heavy Metals: Quantitative Heavy Metals in Hemp PT/Express (EW-61203-00/EW-61204-58)
- Terpenes: Quantitative Terpenes in Oil PT/Express, Quantitative Terpenes in Hemp PT/Express (EW-61201-99/EW-61202-27/EW-61204-29/42)
- Potency: Quantitative Potency in Oil PT/Express (EW-61204-19/EW-61201-90), Quantitative Potency in Hemp PT/Express (EW-61201-98/EW-61204-28)
- Solvents: Quantitative Residual Solvents in Oil PT/Express (EW-61203-79/49)

### Collaborative Testing Services:

Collaborative Testing Services (CTS) is PTP accredited to ISO/IEC 17043.

- Moisture: Hemp: Moisture Content (9691)
- Terpenes: Hemp: Terpenes (9660)

### Emerald Scientific:

Emerald Scientific is a PT supplier who sells PT samples from two (2) PT providers - NSI Lab Solutions and Absolute Standards. Each provider is accredited to ISO/IEC 17043.

- Filth and Foreign Materials: Foreign Materials (Filth) in Hemp PT, Blind or Express (CMPT-047)
- Aspergillus: Qualitative Aspergillus Molds in Hemp/Hemp Matrix, Qualitative Aspergillus Molds in Hemp Oil/Hemp Oil Matrix (CMPT-031, CMPT-033)
- Salmonella: Qualitative Salmonella in Hemp Matrix/Express, Qualitative Salmonella in Hemp Oil Matrix/Express (CMPT-025/027)
- STEC: Qualitative Shiga Toxin E. Coli STEC in Hemp/Hemp Matrix, Qualitative Shiga Toxin E. Coli STEC in Hemp Oil/Hemp Oil Matrix (CMPT-028/030)
- Total Aerobic: Quantitative Aerobic Plate Count (APC/TVC) in Hemp/Hemp Matrix (CMPT-036)
- Total Yeast & Mold: Quantitative Indicators for Yeast/Mold in Hemp/Hemp Matrix (CMPT-040)
- Moisture Content: Moisture in Hemp Bud/Oil (55237-EX/55248-EX), Moisture in Hemp Express/Blind (CMPT-022)
- Water Activity: Water Activity in Hemp Bud/Blind (55231-EX/55246-EX), Water Activity in Hemp/Hemp Oil (CMPT-021/CMPT-081), Water Activity (Humidity) in Hemp Oil (55245-EX)
- Terpenes: Terpenes in Hemp Oil/Hemp Bud (38448-EX/38516-EX), Terpenes in Hemp Matrix/Hemp Oil/Express (CMPT-024/080)
- Metals: MI Medical Marijuana Heavy Metals in Hemp, 7 Component (Michigan) Heavy Metals in Hemp Oil (55251-EX/55252-EX), Heavy Metals in Hemp Matrix/Hemp (CMPT-020)



- Mycotoxin: Quantitative Mycotoxins Express/Hemp Matrix, Quantitative Mycotoxins in Hemp Oil/Hemp Oil Matrix (CMPT-042/061), Aflatoxin & Ochratoxin PT in Hemp Bud/Oil (38499-EX/38498-EX)
- Potency: Total THC in Hemp Bud/Oil (38711-EX/38712-EX), Potency in Hemp/Express (CMPT-023), Potency in Hemp Oil/Express (CMPT-077)
- Pesticides: Florida Pesticide in Hemp Bud/Oil (38514-EX/38513-EX)
- Solvents: Residual Solvents in hemp Oil (38462-EX/38651-EX), Residual Solvents in Hemp Oil (Florida List) (CMPT-018)

### NSI Lab Solutions:

NSI Lab Solutions is PT provider accredited to ISO/IEC 17043, and it is an accredited ISO/IEC 17025 testing laboratory.

- Filth and Foreign Materials: Foreign Materials (Filth) in Hemp (CMPT-047)
- Aspergillus: Qualitative Aspergillus Molds in Hemp/Oil (CMPT-031/33)
- Salmonella: Qualitative Salmonella in Hemp/Oil (CMPT-025/027)
- STEC: Qualitative Shiga Toxin E. coli STEC in Hemp/Hemp Oil (CMPT-030)
- TAC: Quantitative APC/TVC in Hemp (CMPT-036)
- TYM: Quantitative Yeast/Mold in Hemp (CMPT-040)
- Moisture Content: Moisture in Hemp (CMPT-022)
- Water Activity: Water Activity in Hemp Oil, Water Activity in Hemp Matrix (CMPT-081/021)
- Mycotoxin: Quantitative Mycotoxins, Quantitative Mycotoxins in Oil (CMPT-042/061)
- Heavy Metals: Heavy Metals in Hemp Matrix (CMPT-020)
- Terpenes: Terpenes in Hemp/Oil (CMPT-024/080)
- Potency: Potency in Hemp/Oil (CMPT-023/077)
- Solvents: Residual Solvents in Hemp Oil (Florida List) (CMPT-018)

### SPEX:

SPEX is a PT supplier who sells PT samples from NSI Lab Solutions, which is accredited to both ISO/IEC 17025 and ISO/IEC 17043.

- Filth and Foreign Materials: Filth/Extraneous Metals (CMPT-047)
- Aspergillus: Qualitative Aspergillus Molds in Hemp/Oil (CMPT-031/33)
- Salmonella: Qualitative Salmonella in Hemp/Oil (CMPT-025/027)
- TAC: Quantitative APC/TVC in Hemp (CMPT-036)
- TYM: Quantitative Yeast/Mold in Hemp (CMPT-040)
- Moisture: Moisture in Hemp (CMPT-022)
- Water Activity: Water Activity in Hemp/Oil (CMPT-021/081)
- Mycotoxin: Quantitative Mycotoxins in Hemp/Oil (CMPT-042/061)
- Heavy Metals: Heavy Metals in Hemp (CMPT-020)
- Terpenes: Terpenes in Hemp/Oil (CMPT-024/080)
- Potency: Potency in Hemp/Oil (CMPT-023/077)



- Solvents: Residual Solvents (CMPT-018)

Table 1: Potency in Hemp or Hemp Oil

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Potency in Hemp / Oil	CMPT-023 / CMPT-077
Cole Palmer	Quantitative Potency in Oil PT / Express	EW-61204-19 / EW-61201-90
Cole Palmer	Quantitative Potency in Hemp PT / Express	EW-61201-98 / EW-61204-28
Absolute Standards	Total THC in Hemp Bud / Oil	38711 / 38712
NSI Lab Solutions	Potency in Hemp / Oil	CMPT-023 / CMPT-077
Emerald Scientific	Total THC in Hemp Bud / Oil	38711-EX / 38712-EX
Emerald Scientific	Potency in Hemp / Oil	CMPT-023 / CMPT-077

Table 2: Microbiological Contaminants – Total Yeast and Mold (TYM)

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Quantitative Yeast/Mold in Hemp	CMPT-040
Emerald Scientific	Quantitative Indicators for Yeast/Mold in Hemp / Hemp Matrix	CMPT-040
NSI Lab Solutions	Quantitative Yeast/Mold in Hemp	CMPT-040
Cole Parmer	Quantitative Yeast/Mold in Hemp PT / Express	EW-05001-45 / EW-05001-44

Table 3: Microbiological Contaminants – Total Aerobic Count (TAC)

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Quantitative APC/TVC in Hemp	CMPT-036
Emerald Scientific	Quantitative Aerobic Plate Count (APC/TVC) in Hemp / Hemp Matrix	CMPT-036
NSI Lab Solutions	Quantitative APC/TVC in Hemp	CMPT-036
Cole Parmer	Quantitative APC/TVC in Hemp PT / Express	EW-05000-94 / EW-05000-95

Table 4: Microbiological Contaminants – Shiga Toxin Producing E. coli (STEC)

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
Emerald Scientific	Qualitative Shiga Toxin E. Coli STEC in Hemp / Hemp Oil	CMPT-028 / CMPT-030



NSI Lab Solutions	Qualitative Shiga Toxin E. coli STEC in Hemp / Hemp Oil	CMPT-030
Cole Parmer	Qualitative STEC in Hemp PT / Express	EW-05000-85 / EW-05000-86
Cole Parmer	Qualitative STEC in Oil PT / Express	EW-05000-89 / EW-05000-90

**Table 5: Microbiological Contaminants – Salmonella**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Qualitative Salmonella in Hemp / Oil	CMPT-025 / CMPT-027
Emerald Scientific	Qualitative Salmonella in Hemp / Hemp Oil	CMPT-025 / CMPT-027
NSI Lab Solutions	Salmonella: Qualitative Salmonella in Hemp / Oil	CMPT-025 / CMPT-027
Cole Parmer	Qualitative Salmonella in Hemp PT / Express	EW-05000-76 / EW-05000-77
Cole Parmer	Qualitative Salmonella in Oil PT / Express	EW-05000-80 / EW-05000-81

**Table 6: Microbiological Contaminants – Aspergillus**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Qualitative Aspergillus Molds in Hemp / Oil	CMPT-031 / CMPT-033
Emerald Scientific	Qualitative Aspergillus Molds in Hemp / Hemp Oil	CMPT-031 / CMPT-033
NSI Lab Solutions	Qualitative Aspergillus Molds in Hemp / Oil	CMPT-031 / CMPT-033
Cole Parmer	Qualitative Aspergillus Molds in Hemp PT / Express	EW-05000-52 / EW-05000-53
Cole Parmer	Qualitative Aspergillus Molds in Oil PT / Express	EW-05000-56 / EW-05000-57

**Table 7: Mycotoxins in Hemp or Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Quantitative Mycotoxins in Hemp / Oil	CMPT-042 / CMPT-061
Emerald Scientific	Quantitative Mycotoxins in Hemp / Oil	CMPT-042 / CMPT-061
Emerald Scientific	Aflatoxin & Ochratoxin PT in Hemp Bud / Oil	38499-EX / 38498-EX
NSI Lab Solutions	Quantitative Mycotoxins / in Oil	CMPT-042 / CMPT-061



Absolute Standards	Aflatoxin & Ochratoxin PT in Hemp Bud / Oil	38498 / 38499
Cole Parmer	Quantitative Mycotoxins in Oil PT / Express	EW-61204-55 / EW-61204-59
Cole Parmer	Quantitative Mycotoxins	EW-61203-26 / EW-61203-68

**Table 8: Trace / Heavy Metals in Hemp or Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Heavy Metals in Hemp	CMPT-020
Emerald Scientific	MI Medical Marijuana Heavy Metals in Hemp	55251-EX
Emerald Scientific	7 Component (Michigan) Heavy Metals in Hemp Oil	55252-EX
Emerald Scientific	Heavy Metals in Hemp Matrix	CMPT-020
NSI Lab Solutions	Heavy Metals in Hemp Matrix	CMPT-020
Absolute Standards	MI Heavy Metals on Hemp / Hemp Oil PT	55251 / 55252
Cole Parmer	Quantitative Heavy Metals in Hemp PT / Express	EW-61203-00 / EW-61204-58

**Table 9: Water Activity in Hemp or Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Water Activity in Hemp / Oil	CMPT-021 / CMPT-081
Emerald Scientific	Water Activity in Hemp Bud / Blind	55231-EX / 55246-EX
Emerald Scientific	Water Activity in Hemp / Hemp Oil	CMPT-021 / CMPT-081
Emerald Scientific	Water Activity (Humidity) in Hemp Oil	55245-EX
NSI Lab Solutions	Water Activity in Hemp Oil / Hemp Matrix	CMPT-081 / CMPT-021
Absolute Standards	Water Activity (Humidity) in Hemp Bud / Oil	55246 / 55245
Cole Parmer	Quantitative Water Activity in Oil PT / Express	EW-61203-23 / EW-61203-43
Cole Parmer	Quantitative Water Activity in Hemp PT / Express	EW-61204-66 / EW-61204-71

**Table 10: Moisture Content**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Moisture in Hemp	CMPT-022
Emerald Scientific	Moisture in Hemp Bud / Oil	55237-EX / 55248-EX
Emerald Scientific	Moisture in Hemp / Express	CMPT-022





NSI Lab Solutions	Moisture in Hemp	CMPT-022
Absolute Standards	Percent Moisture in Hemp Bud / Oil PT	55237 / 55248
Cole Parmer	Quantitative Moisture in Hemp PT / Express	EW-61202-25/EW-61204-39
Collaborative Testing Services	Hemp: Moisture Content	9691

**Table 41: Filth and Foreign Material**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Filth/Extraneous Metals	CMPT-047
Emerald Scientific	Foreign Materials (Filth) in Hemp PT / Express	CMPT-047
NSI Lab Solutions	Foreign Materials (Filth) in Hemp	CMPT-047
Cole Parmer	Qualitative Filth/Extraneous Metals in Hemp PT / Blind	EW-61203-70 / EW-61203-70-96

**Table 12: Residual Solvents in Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Residual Solvents	CMPT-018
Emerald Scientific	Residual Solvents in Hemp Oil	38462-EX / 38651-EX
Emerald Scientific	Residual Solvents in Hemp Oil (Florida List)	CMPT-018
NSI Lab Solutions	Residual Solvents in Hemp Oil (Florida List)	CMPT-018
Absolute Standards	Residual Solvents PT in Hemp Oil	38651
Absolute Standards	California Residual Solvents PT in Hemp Oil	38462
Cole Parmer	Quantitative Residual Solvents in Oil PT/Express	EW-61203-79 / EW-61203-49

**Table 13: Pesticides in Hemp or Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
Emerald Scientific	Florida Pesticide in Hemp Bud / Oil	38514-EX / 38513-EX
Absolute Standards	Florida Pesticide PT in Hemp Bud / Oil	38513 / 38514

**Table 14: Terpenoids or Terpenes in Hemp or Hemp Oil**

Proficiency Test Provider or Supplier	Name of Proficiency Test Study	Catalog Number or Equivalent
SPEX	Terpenes in Hemp / Oil	CMPT-024 / CMPT-080





Emerald Scientific	Terpenes in Hemp Oil / Hemp Bud	38448-EX / 38516-EX
Emerald Scientific	Terpenes in Hemp / Hemp Oil / Express	CMPT-024 / CMPT- 080
NSI Lab Solutions	Terpenes in Hemp / Oil	CMPT-024 / CMPT-080
Absolute Standards	Terpenes in Hemp Bud / Oil	38516 / 38448
Cole Parmer	Quantitative Terpenes in Oil PT / Express	EW-61201-99 / EW-61202-27
Cole Parmer	Quantitative Terpenes in Hemp PT/Express	EW-61204-29 / EW-61204-42
Collaborative Testing Services	Hemp: Terpenes	9660

**PT Study Frequency by Provider or Supplier**

A cannabis laboratory can choose between participating in a regular or an express study. Contact the provider or supplier directly to obtain a schedule of PT study dates and to get the costs to participate in scheduled and express or “quick turnaround” PT studies.

**Table 15: Proficiency Test Study Types & Frequency**

Proficiency Test Provider or Supplier	Study Type(s) and Frequency	
<a href="#">SPEX</a>	Supplies NSI Solutions PTs	
<a href="#">Emerald Scientific</a>	Supplies both NSI Solutions and Absolute Standards PTs	
<a href="#">NSI Lab Solutions</a>	Studies are opened twice per year (semi-annually).	Express studies are available throughout the year.
<a href="#">Absolute Standards</a>	Some studies are offered on a regular basis.	“Quick Turn Around” (QTA) are available throughout the year.
<a href="#">Cole Parmer</a>	Supplies NSI Solutions PTs	
<a href="#">Collaborative Testing Services</a>	Enroll at any time; subscriptions start with the next scheduled shipping date and will include two (2) shipments. Samples are distributed in June and December.	

**Proficiency Test Performance**

The proficiency test provider or supplier must provide the results of the proficiency test directly to the Office by emailing [labs@ocm.ny.gov](mailto:labs@ocm.ny.gov). Unsatisfactory proficiency test performance will be handled in accordance with 9 NYCRR § 130.9 (a) and (b).

A laboratory must receive a passing score from the PTP for a single analyte study such as filth & foreign material, water activity and moisture content.

For each microbiological analyte, the laboratory must pass the PT study overall regardless of the number of samples included as part of the study.



For a multi-analyte PT study such as pesticides, residual solvents and terpenes, the laboratory will pass if the criteria in Table 16 are met.

Table 16: Criteria for Passing Multi-Analyte PT Studies

Group of Analytes	Number of Spiked Analytes	Score
Potency	≤10 analytes	100% - Pass each analyte spiked
Metals	≤10 analytes	100%
Mycotoxins	≤10 analytes	100%
Residual Solvents	≤10 analytes	100%
	>10	80% - Pass 80% of the total number spiked
Pesticides	≤10 analytes	100%
	>10	80%
Terpenes	≤10 analytes	100%
	>10	80%

References

The NELAC Institute (TNI) 2003 Standards - [The NELAC Institute \(TNI\) \(nelac-institute.org\)](http://nelac-institute.org)

The NELAC Institute (TNI) 2016 Standards - [The NELAC Institute \(TNI\) \(nelac-institute.org\)](http://nelac-institute.org)

U.S. Environmental Protection Agency (EPA) - 40 CFR 141.24 (f)(17)(i)(B)

[May 2023 PT Guide.pdf \(wadsworth.org\)](http://wadsworth.org)

[Oregon Health Authority, Public Health Division, Chapter 333, Division 64, Accreditation of Laboratories](#)

Revision Record

02/27/24 – First presentation of PT providers and suppliers was organized to be alphabetically. They are not listed alphabetically in the Tables.

07/11/24 – Provided clarifying language under Guidance section. Provided clarifying language under Unsatisfactory PT Performance section for long analyte list PTs – pesticides and residual solvents. Added a Reference section.