



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

*Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:*

***Murray-Brown Laboratories***  
***11455 Pearl St. Northglenn, CO 80233***

*(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:*

**ISO/IEC 17025:2017**

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

***Biological & Chemical Testing***  
***(As detailed in the supplement)***

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen  
President

Perry Johnson Laboratory  
Accreditation, Inc. (PJLA)  
755 W. Big Beaver, Suite 1325  
Troy, Michigan 48084

Initial Accreditation Date:

July 03, 2012

Issue Date:

June 21, 2024

Expiration Date:

August 31, 2026

Accreditation No.:

72716

Certificate No.:

L24-470

*The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: [www.pjilabs.com](http://www.pjilabs.com)*



# Certificate of Accreditation: Supplement

## Murray-Brown Laboratories

11455 Pearl St. Northglenn, CO 80233  
 Contact Name: Brenda Brown Phone: 303-296-0264

*Accreditation is granted to the facility to perform the following testing:*

| FLEX CODE | FIELD OF TEST           | ITEMS, MATERIALS, OR PRODUCTS TESTED         | COMPONENT, CHARACTERISTIC, PARAMETER TESTED  | SPECIFICATION OR STANDARD METHOD                | TECHNOLOGY OR TECHNIQUE USED                        |                           |                           |
|-----------|-------------------------|--|--|---|---|---------------------------|---------------------------|
| F1, F2    | Biological <sup>F</sup> | Food, Liquids, Contact Swabs, Nutraceuticals | Aerobic Plate Count  | AOAC OM 990.12                                  | Petrifilm <sup>®</sup>                              |                           |                           |
| F1, F2    |                         |  |  | AOAC OM 2015.13                                 |   |                           |                           |
| F1, F2    |                         |  | <i>Aspergillus niger</i><br><i>Aspergillus flavus</i><br><i>Aspergillus fumigatus</i><br><i>Aspergillus terreus</i>  | AOAC PTM 022103<br>Aspergillus PRO <sup>™</sup> | PCR, GENE-UP <sup>®</sup>                           |                           |                           |
| F1, F2    |                         |  | Coliform Bacteria<br><i>Escherichia coli</i>   |   | AOAC OM 991.14                                      | Petrifilm <sup>®</sup>    |                           |
| F1, F2    |                         |  |  |   | AOAC OM 998.08                                      |                           |                           |
| F1, F2    |                         |  |  |   | AOAC OM 2018.13                                     |                           |                           |
| F1, F2    |                         |  | <i>Escherichia coli</i><br><i>Salmonella</i> spp.<br><i>Staphylococcus aureus</i>  |   | AOAC PTM 082103<br>NUTRAPLEX PRO <sup>™</sup>       | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  |  |   | <i>E. coli</i> O157:H7                              | AOAC RI 031002            | PCR, BAX <sup>®</sup>     |
| F1, F2    |                         |  |  | AOAC RI 102003 EXACT                            |   |                           |                           |
| F1, F2    |                         |  |  |   | AOAC RI 121805                                      | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  | <i>Enterobacteriaceae</i>  |   | AOAC OM 2003.01                                     | Petrifilm <sup>®</sup>    |                           |
| F1, F2    |                         |  | Lactic Acid Bacteria   |   | AOAC RI 041701                                      | Petrifilm <sup>®</sup>    |                           |
| F1, F2    |                         |  | <i>Listeria</i> spp.<br><i>Salmonella</i> spp.   |   | AOAC PTM 061801<br>enviroPRO <sup>™</sup>           | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  | <i>Listeria monocytogenes</i>  |   | AOAC RI 121402                                      | PCR, BAX <sup>®</sup>     |                           |
| F1, F2    |                         |  |  |   | AOAC RI 121804                                      | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  | <i>Listeria</i> spp.   |   | AOAC RI 081401                                      | PCR, BAX <sup>®</sup>     |                           |
| F1, F2    |                         |  |  |   | AOAC RI 121803                                      | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  | <i>Salmonella</i> spp.   |   | AOAC RI 081201                                      | PCR, BAX <sup>®</sup>     |                           |
| F1, F2    |                         |  |  |   | AOAC OM 2013.02                                     |                           |                           |
| F1, F2    |                         |  |  |   | AOAC RI 121802                                      |                           | PCR, GENE-UP <sup>®</sup> |
| F1, F2    |                         |  | Shiga Toxin-producing<br><i>Escherichia coli</i> (STEC)<br>( <i>E. coli</i> O26, <i>E. coli</i> O45,<br><i>E. coli</i> O103, <i>E. coli</i> O111,<br><i>E. coli</i> O121, <i>E. coli</i> O145) |   | AOAC RI 091301                                      | PCR, BAX <sup>®</sup>     |                           |
| F1, F2    |                         |  |  |   | AOAC RI 121806                                      | PCR, GENE-UP <sup>®</sup> |                           |
| F1, F2    |                         |  |  |   | AOAC PTM 022203<br>Pathogenic <i>E. coli</i> (PEC)  |                           |                           |
| F1, F2    |                         |  | Shiga Toxin-producing<br><i>Escherichia coli</i> (STEC)<br><i>Salmonella</i> spp.  |   | AOAC PTM 092101<br>PRO <sup>™</sup> STEC/Salmonella |                           |                           |
| F1, F2    |                         |  | <i>Staphylococcus aureus</i>   |   | AOAC OM 2003.07                                     | Petrifilm <sup>®</sup>    |                           |
| F1, F2    |                         |  |  |   | AOAC OM 2003.11                                     |                           |                           |
| F1, F2    |                         |  | Yeast and Mold   |   | AOAC RI 121301                                      | Petrifilm <sup>®</sup>    |                           |
| F1, F2    |                         |  | Drinking Water   | Total Coliforms,<br><i>Escherichia coli</i>     |   | SM 9223B                  | Colisure                  |



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|------------|-----------------------|---|--|---|------------------------------|
| F1, F2, F4 | Chemical <sup>F</sup> | Hand Sanitizer, Beverages                         | <b>Alcohols:</b><br>1-Propanol, Ethanol, Methanol  | SOP C.018:<br>AOAC 984.14   | GC-FID                       |
| F1, F2, F4 |                       | Food, Nutraceuticals, Plant & Raw Materials       | Ash  | SOP C.005:<br>AOAC OM 900.02<br>AOAC OM 920.153<br>AOAC OM 923.03 | Muffle Furnace               |
| F1, F2, F4 |                       | Food, Beverages, Coffee, Tea                      | Caffeine   | SOP C.009:<br>AOAC OM 980.14<br>ISO 20481:2008                    | HPLC                         |
| F1, F4     |                       | Tinctures, Gummies, Softgels, Distillate, Isolate | <b>Cannabinoids:</b><br>CBC<br>CBD<br>CBDA<br>CBDV<br>CBG<br>CBN<br>CBT<br>Δ9 THC<br>Δ9 THCA-A<br>Potential CBD<br>Potential THC<br>THCV | SOP C.012   | HPLC                         |
| F1, F2, F4 |                       | Food, Nutraceuticals, Raw Material                | Cholesterol  | SOP C.008:<br>AOAC OM 994.10                                      | GC-FID                       |
| F1, F2, F4 |                       | Food, Nutraceuticals, Plant & Raw Materials       | Dietary Fiber  | SOP C.006:<br>AOAC OM 991.43                                      | Enzymatic-Gravimetric        |
| F1, F2, F4 |                       | Meat  | Fat, Crude   | SOP C.001:<br>AOAC 991.36   | Soxtec™                      |
| F1, F2, F4 |                       | Food, Nutraceuticals, Plant & Raw Materials       | Fat, Total   | SOP C.002:<br>AOAC OM 992.06                                      | Acid Hydrolysis              |
| F1, F2, F4 |                       |   | Fatty Acid Profile   | SOP C.010:<br>AOAC OM 996.01<br>AOAC OM 996.06                    | GC-FID                       |
| F1, F2, F4 |                       | Food, Oils  | Free Fatty Acid  | SOP C.TIT-006:<br>AOAC OM 940.28                                  | Titration                    |
| F1, F2     |                       | Food, Contact Swabs                               | Gluten   | AOAC RI 061403  | AgraStrip Gluten G12         |
| F1, F4     |                       | Extracts, Finished Products, Plant Material       | <b>Kavalactones:</b><br>Desmethoxyyangonin<br>Dihydrokawain<br>Dihydromethysticin<br>Kawain<br>Methysticin<br>Yangonin                   | SOP C.019   | HPLC                         |



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|------------|-----------------------|--|--|--|---|
| F1, F2, F4 | Chemical <sup>F</sup> | Extracts, Finished Products, Plant Material                            | <b>Kratom Alkaloids:</b><br>7-Hydroxymitragynine<br>Isorhynchophylline<br>Mitragynine<br>Mitrephylline<br>Paynantheine<br>Speciociliatine<br>Speciogynine<br>Total Alkaloids   | SOP C.C.017:<br>AOAC OM 2017.14                    | Extracts, Finished Products, Plant Material |
| F1, F2, F4 |                       | Food, Nutraceuticals, Plant & Raw Materials                            | <b>Metals:</b><br>As, Cd, Pb, Hg, Se   | SOP C.007:<br>AOAC OM 2015.01                      | ICP-MS                                      |
| F1, F2, F4 |                       |  | <b>Minerals:</b><br>Ca, Cu, Fe, Mg, Mn, P, K, Na, Zn   | AOAC OM 2015.06<br>USP 232, USP 233                |   |
| F1, F2, F4 |                       |  | Moisture, Total  | SOP C.003:<br>AOAC 950.46                          |   |
| F1, F4     |                       | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | <b>Mycotoxins:</b><br>Aflatoxin B1, B2, G1, G2<br>Ochratoxin A   | SOP C.014<br>SOP C.021                             | UPLC-MS/MS                                  |
| F1, F2, F4 |                       | Food, Nutraceuticals, Plant & Raw Materials                            | Peroxide Value   | SOP C.TIT.007:<br>AOAC OM 965.33<br>AOAC OM 983.23 | Titration                                   |
| F1, F4     |                       | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | <b>Pesticides:</b><br>Abamectin (B1a + B1b)<br>Acephate<br>Acequinocyl<br>Acetamiprid<br>Aldicarb<br>Allethrin<br>Atrazine<br>Azadirachtin A<br>Azadirachtin B<br>Azoxystrobin<br>Benzovindiflupyr<br>Bifenazate<br>Bifenthrin<br>Boscalid<br>Buprofenzin<br>Carbaryl<br>Carbofuran<br>Chlorantraniliprole<br>Chlorfenapyr<br>Chlorpyrifos<br>Clofentezine<br>Clothianidin<br>Coumaphos<br>Cyantranilipole<br>Cyfluthrin (Baythroid) | SOP C.014<br>SOP C.021                             | LC-MS<br>UPLC-MS/MS                         |



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|-----------|-----------------------|--|--|----------------------------------|------------------------------|
| F1, F4    | Chemical <sup>F</sup> | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | <b>Pesticides:</b><br>Cypermethrin<br>Cyprodinil<br>Daminozide<br>Deltamethrin<br>Diazinon<br>Dibrom (Naled)<br>Dichlorvos<br>Dimethoate<br>Dimethomorph<br>Dinotefuran<br>Diuron<br>Dodemorph<br>Endosulfan sulfate<br>Ethofenprox<br>Ethoprophos (Prophos)<br>Etoxazole<br>Fenhexamid<br>Fenoxycarb<br>Fenpyroximate<br>Fensulfothion <sup>F3</sup><br>Fenthion <sup>F3</sup><br>Fenvalerate <sup>F3</sup><br>Fipronil<br>Flonicamid<br>Fludioxonil<br>Fluopyram<br>Hexythiazox<br>Imazalil<br>Imidacloprid<br>Iprodione<br>Kresoxim-methyl<br>λ Cyhalothrin<br>Malathion<br>Metalaxyl<br>Methiocarb<br>Methomyl<br>Methoprene<br>MGK-264<br>Novaluron<br>Oxamyl<br>Paclobutrazol<br>Permethrin<br>Phenothrin<br>Phosdrin (Mevinphos)<br>Phosmet<br>Piperonyl Butoxide<br>Pirimicarb | SOP C.014<br>SOP C.021           | LC-MS<br>UPLC-MS/MS          |



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|------------|------------------------|--|--|---|------------------------------|
| F1, F4     | Chemical <sup>F</sup>  | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | <b>Pesticides:</b><br>Prallethrin<br>Propiconazol<br>Propoxur<br>Pyralostrobin<br>Pyrethrins<br>Pyridaben<br>Pyriproxifen<br>Resmethrin<br>Spinetoram<br>Spinosad (A, D)<br>Spirodiclofen<br>Spiromesifen<br>Spirotetramat<br>Spiroxamine<br>Systhane (Myclobutanil)<br>Tebuconazol (Folicur)<br>Tebufenozide<br>Teflubenzuron<br>Tetrachlorvinphos<br>Tetramethrin<br>Thiabendazole<br>Thiacloprid<br>Thiamethoxam<br>Thiophanate-methyl<br>Trifloxystrobin | SOP C.014<br>SOP C.021  | LC-MS<br>UPLC-MS/MS          |
| F1, F4     |                        |  | <b>Pesticides:</b><br>Endosulfan-alpha<br>Endosulfan-beta<br>Etridiazole<br>Fenvalerate<br>Kinoprene<br>Parathion Methyl<br>Pentachloronitrobenzene (PCNB)   | SOP C.020   | GC-MS/MS                     |
| F1, F2, F4 | Chemical <sup>FO</sup> | Liquids, Food, Nutraceuticals  | pH   | SOP A.001:<br>AOAC OM 973.41<br>AOAC OM 981.12<br>USDA FSIS MGL Ch 2<br>APHA SMEDP 15.022 | pH Meter                     |
| F1, F2, F4 | Chemical <sup>F</sup>  | Food, Nutraceuticals, Plant & Raw Materials                            | Protein, Total   | SOP C.004:<br>AOAC OM 992.15  | Combustion Method            |





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|------------|------------------------------|--|--|--|------------------------------|
| F1, F2, F4 | Chemical <sup>F</sup>        | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | <b>Residual solvents:</b><br>1,2-Dichloroethane<br>2-Propanol<br>Acetone<br>Acetonitrile<br>Benzene<br>Chloroform<br>Cyclohexane<br>Diethyl ether<br>Ethanol<br>Ethyl Acetate<br>Heptane<br>Hexane<br>Methanol<br>Methylene chloride<br>N,N-Dimethylformamide<br>Pentane<br>Toluene<br>Trichloroethene<br>Xylenes (p-, m-, o-) | SOP C.016:<br>USP 467                              | Heated Headspace GC-MS       |
| F1, F2, F4 |                              | Food, Nutraceuticals, Plant & Raw Materials                            | Salt   | SOP C.TIT.001:<br>AOAC 935.47                      | Titration                    |
| F1, F2, F4 |                              | Liquids  | Specific Gravity   | SOP C.011:<br>ASTM D4062                           | Density Meter                |
| F1, F2, F4 |                              | Food, Nutraceuticals, Plant & Raw Materials                            | Sugars, Total  | SOP C.013:<br>AOAC OM 984.17                       | HPLC                         |
| F1, F2, F4 |                              | Liquids  | Titratable Acidity   | SOP C.TIT.002:<br>AOAC OM 920.92<br>AOAC OM 962.12 | Titration                    |
| F1, F2, F4 |                              | Liquids  | Tributyl Tetradecyl Phosphonium Chloride (TTPCs)   | SOP C.TIT.005:<br>AOAC 935.47                      |                              |
| F1, F2, F4 |                              | Food, Nutraceuticals, Plant & Raw Materials                            | Vitamin A – Retinol Palmitate and Retinol Acetate  | SOP C.VIT.001:<br>AOAC 2012.10                     | HPLC                         |
| F1, F2, F4 | Vitamin C – Ascorbic Acid    |  | SOP C.VIT.002:<br>AOAC 2012.21   |  |                              |
| F1, F2, F4 | Vitamin D3 – Cholecalciferol |  | SOP C.VIT.003:<br>AOAC 2011.11   | UPLC-MS/MS   |                              |
| F1, F2, F4 |                              | Solvents, Extracts   | Water by Karl Fischer  | SOP C.TIT.008:<br>AOAC OM 977.10                   | Titration                    |
| F1, F2, F4 |                              | CBD Products, Food, Ingredients, Nutraceuticals, Plant & Raw Materials | Water Activity by AQUALAB TDL 2  | SOP A.002:<br>AOAC OM 978.18                       | Water Activity Meter         |



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1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location.
2. The presence of a superscript O means that the laboratory performs testing of the indicated parameter onsite at customer locations.
3. Flex Code:
  - F0- Fixed scope item. No deviations allowed to the line item as identified, except for updating to the most recent version of an accredited standard method after verification.
  - F1- Laboratory has the capability to test a new item, material, matrix, or product similar in composition to item, material, matrix, or product identified on the scope
  - F2- Laboratory has the capability to introduce the newest revision of an accredited authoritative standard method (with no modifications) identified on the scope
  - F3- Laboratory has the capability to introduce a parameter/component/analyte to an accredited test method identified on the scope
  - F4- Laboratory has the capability to introduce a new revision of an accredited non-standard method using the same technology or technique identified on the scope
  - F5- Laboratory has the capability to introduce a validated method that is equivalent to an accredited method (using same technology or technique) identified on the scope

