



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

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

***Twin Arbor Analytical***  
3474 Empresa Drive Ste 140, San Luis Obispo, CA 93401

*(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):

***Chemical, and Biological 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

*Initial Accreditation Date:*

March 26, 2020

*Issue Date:*

June 23, 2022

*Expiration Date:*

August 31, 2024

*Revision Date:*

January 18, 2024

*Accreditation No.:*

99531

*Certificate No.:*

L22-459-R1

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

*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.pjllabs.com](http://www.pjllabs.com)*



# Certificate of Accreditation: Supplement

## Twin Arbor Analytical

3474 Empresa Drive Ste 140, San Luis Obispo, CA 93401

Contact Name: Forrest Richmond Phone: 805-400-9711

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

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Chemical <sup>F</sup>	Hemp, Cannabis, concentrates, cannabinoid infused products	<b>Cannabinoids:</b> CBD CBDA Δ9-THC THCA CBG CBGA CBC CBDV CBN Δ8-THC THCV	TM0002 Cannabis Potency by HPLC-DAD	0.005 mg/g to 1 000 mg/g
		<b>Mycotoxins:</b> Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2 Ochratoxin A	TM0004 Pesticides and Mycotoxins by LCMS	0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g
		<b>Pesticides:</b> Acequinocyl Acetamiprid Aldicarb Azoxystrobin Bifenazate Bifenthrin Boscalid Captan Carbaryl Carbofuran Chlorantraniliprole Chlordane Chlorfenapyr Chlorpyrifos Clofentezine Coumaphos Cyfluthrin Cypermethrin Daminozide DDVP(Dichlorvos) Diazinon Dimethoate Dimethomorph Ethoprop(hos) Etofenprox Etoxazole		0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.35 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.08 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.16 µg/g to 100 µg/g 0.09 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g 0.05 µg/g to 100 µg/g



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Chemical <sup>F</sup>	Hemp, Cannabis, concentrates, cannabinoid infused products	<b>Pesticides:</b> Fenhexamid Fenoxycarb Fenpyroximate Fipronil Flonicamid Fludioxonil Hexythiazox Imazalil Imidacloprid Kresoxim-methyl Malathion Metalaxyl Methiocarb Methomyl Methyl Mevinphos Myclobutanil Naled Oxamyl Paclobutrazol Parathion Pentachloronitrobenzene Permethrin Phosmet Piperonylbutoxide Prallethrin Propiconazole Propoxur Pyrethrins Pyridaben Spinetoram Spinosad Spiromesifen Spirotetramat Spiroxamine Tebuconazole Thiacloprid Thiamethoxam Trifloxystrobin	TM0004 Pesticides and Mycotoxins by LCMS	0.05 µg/g to 100 µg/g
				0.05 µg/g to 100 µg/g
	Hemp, Cannabis, Biomass	Moisture Content	TM0008 Moisture Content by Oven, AOAC 945.21. TM0009 Moisture Content by Moisture Balance	0.01 % to 90 %
				0.01 % to 45 %



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Chemical <sup>F</sup>	Food products, edible oils, dietary supplements, Hemp, Cannabis, Cannabis infused products	<b>Heavy Metals:</b> As Cd Hg Pb	AOAC 2015.01, Heavy Metals in Food  TM0005 Heavy Metals in Cannabis and Cannabis infused products.	0.01 µg/g to 100 µg/g		
		<b>Residual Solvents:</b> Propane Butane Ethylene oxide Pentane Ethyl ether Acetone Methylene chloride Ethyl acetate 1,2-Dichloroethane Methanol Ethanol Isopropyl alcohol Acetonitrile Chloroform Hexane Benzene Heptane Trichloroethylene Toluene m,p - Xylene o - Xylene	USP 467  TM0006 Residual Solvents by GC-MS	D.L. = 13.91 µg/g D.L. = 64 µg/g D.L. = 0.4 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 17.68 µg/g D.L. = 0.72 µg/g D.L. = 0.76 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 0.72 µg/g D.L. = 1.44 µg/g D.L. = 0.72 µg/g		
	Hemp	Total THC	TM0014 Total THC in industrial Hemp	0.05 % to 50 %		
	Food products and dietary supplements		Ca K P Na Mg Fe Cu Mn Zn Mo	USP 730 AOAC 2011.14	0.01 ug/g to 1 000 mg/g	
			Dietary Supplements	Water Content	USP 921 Water Determination	1 % to 100 %
			Food Products, Beverages	Ethanol	TM0032	0.052 % ABV
				pH	ASBC_9	1 to 14
				Total acidity	ASBC_8	1 g/L to 10 g/L



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Biological <sup>F</sup>	Food, environmental	E. coli O157:H7 (PCR-BAX RT)	AOAC-RI 031002	Presence / Absence
	Food, environmental, Hemp, Cannabis, Cannabis infused products	E. coli (PCR-BAX RT)	AOAC-RI 091301	
		Salmonella spp. (PCR-BAX RT)	AOAC-RI 081201	
	Food, environmental	Listeria spp. (PCR-BAX RT)	AOAC-RI 081401	D.L. = 10 cfu/g or mL
	Food, raw material	Total yeast and mold (Compact Dry YMR)	AOAC 092002	
	Food, cosmetics, raw materials, environmental	Total aerobic plate count (Compact Dry TC)	AOAC 010404	
	Food, water, environmental	E. coli and Coliform (Compact Dry EC)	AOAC 110402	
	Food Products, Beverages	Saccharomyces Wild yeast Brettanomyces Zygosaccharomyces Hanseniaspora Oenococcus Lactobacillus Pediococcus Acetic acid producing bacteria Bacillus Megasphaera Pectinatus Komagataeibacter Saccharomycodes	TM0033 Detection of beverage spoilage microbes by qPCR	D.L. = 1 cfu/mL
	Hemp, cannabis, and cannabis infused products	Aspergillus spp., E. coli STEC and Salmonella spp. (PCR-Medicinal Genomics RT)	TM0003 Microbial Impurities	Presence / Absence
	Nonsterile products	Microbial Enumeration Tests	USP 61	D.L. = 10 cfu/g or mL
		Tests for Specified Microorganisms	USP 62	Presence / Absence
	Food, cosmetics, raw materials, environmental	Aerobic Plate Counts	FDA BAM Ch. 3	D.L. = 10 cfu/g or mL



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Biological <sup>F</sup>	Cosmetics	Tests for Specified Microorganisms	FDA BAM Ch. 23	Presence / Absence 10 cfu/g or mL and
	Dietary Supplements	Microbial Enumeration Tests	USP 2021	D.L. = 10 cfu/g or mL
		Tests For Specified Microorganisms	USP 2022	Presence / Absence
	Raw materials, finished products, or on environmental surfaces pertaining to food and related industries.	Staphylococcus aureus	AOAC 081001	D.L. = 1 cfu/g or mL to 10 cfu/g or mL (dependent on material)

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location.

