PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

PTOI Testing Lab, Inc. DBA: Medicine Creek Analytics

3700 Pacific Highway E. Suite 400, Fife, WA 98424

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

ISO/IEC 17025:2005

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 January 2009):

Chemical and Microbiological 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/Operations Manager

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
March 17, 2017	March 17, 2017	May 31, 2019

Accreditation No.:	*Certificate No.:*
91428	L17-120

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.pjlabs.com

Certificate of Accreditation: Supplement

PTOI Testing Lab, Inc. DBA: Medicine Creek Analytics
3700 Pacific Highway E. Suite 400, Fife, WA 98424
Contact Name: Dr. Aaron Stancik Phone: 253-382-6900

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 [F]	Cannabis Plant Material	Moisture Content	SOP # MCA S009 (Gravimetric)	D.L. = 0.1 % Mw
	Cannabis Extracts	Cannabidiol (CBD)	SOP # MCA S005 (HPLC-UV)	D.L. = 0.005 % by mass
		Cannabidivarin (CBDV)		
		Cannabidiolic Acid (CBDA)		
		Cannabigerol Acid (CBGA)		
		Cannabinol (CBN)		
		delta-9-Tetrahydrocannabinol (THC)		
		delta-8- Tetrahydrocannabinol-(Δ8-THC)		
		Cannabichromene (CBC)		
		Tetrahydrocannabivarin (THCV)		
		Tetrahydrocannabinolic Acid (THCA)		
	Cannabis Infused Products	Cannabidiol (CBD)		D.L. = 0.3 mg/g
		Cannabidivarin (CBDV)		
		Cannabidiolic Acid (CBDA)		
		Cannabigerol Acid (CBGA)		
		Cannabinol (CBN)		
		delta-9-Tetrahydrocannabinol (THC)		
		delta-8- Tetrahydrocannabinol-(Δ8-THC)		
		Cannabichromene (CBC)		
		Tetrahydrocannabivarin (THCV)		
		Tetrahydrocannabinolic Acid (THCA)		
	Cannabis Plant Material	Cannabidiol (CBD)		D.L. = 0.04 % by mass
		Cannabidivarin (CBDV)		
		Cannabidiolic Acid (CBDA)		
		Cannabigerol Acid (CBGA)		
		Cannabinol (CBN)		
		delta-9-Tetrahydrocannabinol (THC)		
		delta-8- Tetrahydrocannabinol-(Δ8-THC)		
		Cannabichromene (CBC)		
		Tetrahydrocannabivarin (THCV)		

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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 [F]	Cannabis Plant Material	Tetrahydrocannabinolic Acid (THCA)	SOP # MCA S005 (HPLC-UV)	D.L. = 0.04 % by mass
		Terpenes (a-pinene, Camphene, b-myrcene, b-pinene, 3-carene, a-terpinene, Ocimene 2, Limonene, p-cymene, Ocimene 1, gamma-terpinene, Terpinolene, Linalool, Geraniol, Terpineol 3, Terpineol 1, Terpineol 2, Isopulegol, Cirtral 1 Citral 2, b-caryophyllene, a-humulene, cis-nerolidol, trans-nerolidol, Guaiol, a-bisabolol)	GC-FID	D.L. = 20 mg/Kg
	Cannabis Extracts	Terpenes (a-pinene, Camphene, b-myrcene, b-pinene, 3-carene, a-terpinene, Ocimene 2, Limonene, p-cymene, Ocimene 1, gamma-terpinene, Terpinolene, Linalool, Geraniol, Terpineol 3, Terpineol 1, Terpineol 2, Isopulegol, Cirtral 1 Citral 2, b-caryophyllene, a-humulene, cis-nerolidol, trans-nerolidol, Guaiol, a-bisabolol)		
		Total Residual Solvents [2]	MCA S011 (GC-FID)	
Microbiological [F]	Cannabis Plant Material	Aerobic	SOP # MCA S006 (Petrifilm)	D.L. = 5 mg/Kg
		Yeast and Mold		
		Coliform		
		Bile Tolerant gram negative		
		E. Coli		Presence/Absence
		Salmonella	SOP # MCA S006 (Rapid Test Kit)	Presence/Absence

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer[F] would mean that the laboratory performs this testing at its fixed location.

2. Residual Solvents as determined from the concentration of N-butane, 2-methylpropane, 1,1,1-Trichloroethane, 1,1-Dichloroethane, Carbon Tetrachloride, Benzene, Cyclohexane, Methanol, m-Xylene, Methylcyclohexane, Cis-1,2-Dichloroethene, Trans-1,2,-Dichloroethane, Toluene, Tetrahydrofuran, Methylene Chloride, Acetonitrile, 1,4-Dioxane, Ethylbenzene, Chlorobenzene, p-Xylene, o-Xylene, n-Pentane, Acetone, Isopropanol, Ethyl Acetate, n-Heptane.

3. The term Mw represents the units of measurement for moisture wet basis.