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OREGON SECRETARY OF STATE

REGISTRY NUMBER: 47132 For office use only

In accordance with Oregon Revised Statute 192.410-192.490, the information on this application is public record. We must release this information to all parties upon request.

For office use only

Please Type or Print Legibly in Black ink. Attach additional Sheets if Necessary.

- 1) CORRESPONDENT NAME: Ernie G. Bootsma, Ater Wynne LLP MAILING ADDRESS: 1331 NW Lovejoy Street, Suite 900, Portland, OR 97209
2) APPLICANT'S NAME: (Owner: Individual or Entity) ADDRESS: Northwest Analytical Labs LLC 630 SW Walnut Street, Hillsboro, Oregon 97123
3) IF THE APPLICANT IS AN ENTITY, ENTER THE STATE OF FORMATION: Oregon
4) IF ENTITY IS A PARTNERSHIP, LIST NAMES OF GENERAL PARTNERS:
5) DESCRIPTION OF TRADE OR SERVICE MARK: (Include all words, designs and borders that comprise the mark) (Attach additional page if needed.) PACLAB ANALYTICS
6) SPECIMEN OF MARK IS REQUIRED: Attach a drawing or photocopy of the mark as it is actually used to this application.
7) GOODS OR SERVICES WITH WHICH THE MARK IS USED: (Examples of goods are pizzas, shirts; examples of services are serving food and selling clothing.) laboratory services; laboratory testing; laboratory services and testing in the field of solvents; laboratory services and testing in the field of pesticides
8) EXPLAIN MODE OR MANNER IN WHICH THE MARK IS USED: (Example: on goods, tags, labels, containers, etc.) in association with services -- website, brochures, etc.
9) CLASS NUMBER(S) OF GOODS OR SERVICES: (See form 290-a) 140
10) DATE (MONTH, DAY, YEAR) MARK WAS FIRST USED ANYWHERE BY APPLICANT OR APPLICANT'S PREDECESSOR IN INTEREST: August 17, 2016
11) DATE (MONTH, DAY, YEAR) MARK WAS FIRST USED IN OREGON BY APPLICANT OR APPLICANT'S PREDECESSOR IN INTEREST: August 17, 2016

12) EXECUTION:

I, the applicant, own the mark, the mark is in use, and no other person has registered the mark with the federal government or in Oregon or has the right to use the mark or a mark that so resembles the mark as to be likely to cause confusion or mistake or deceive when applied to the goods or services of the other person. I declare under penalties of perjury that this application is true, correct and complete.

(If applicant is an entity, a member of a firm, officer of the corporation, officer of the limited liability company, or officer of an association must sign.)

Signature: [Handwritten Signature] Title: Manager Date: 2.14.2018

CONTACT NAME: (To resolve questions with this filing.)

Molly Edwards, IP Specialist

PHONE NUMBER: (Include area code.)

503-226-1191



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PACLAB ANALYTICS



### Cannabis Potency Testing

Cannabis Potency testing refers to a method of quantitatively determining the concentration of cannabinoids in a particular cannabis product, which is intended for consumer consumption. The State of Oregon requires that all cannabis products be tested for Potency (THC, THCA, CBD, and CBDA concentration) according to rules OAR 333-007-0310, OAR 333-007-0320, OAR 333-007-0430, 333-064-0100, and OAR 333-064-0110.

PacLab Analytics® uses High Performance Liquid Chromatography (HPLC) to quantitatively determine the concentration of cannabinoids in cannabis products. HPLC is a powerful method in analytical chemistry for the separation and quantitative analyses of closely related chemical species. In this method, the sample is transported in a mobile phase (a liquid in this case) and forced through an immiscible stationary phase, which is fixed in place in a column. The effectiveness of a chromatographic column in separating two solutes depends in part upon the relative rates at which the two species are eluted. These rates are determined by the magnitude of the equilibrium constants for the reactions by which the solutes distribute themselves



the magnitude of the equilibrium constants for the reactions by which the solutes distribute themselves between the mobile and stationary phases, as described by the Partition Coefficient.

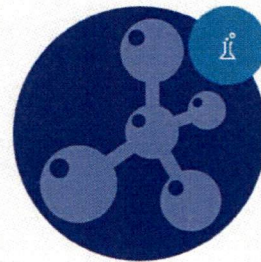
Water Activity and Moisture Content (refer to OAR 333-007-0420) results will be included in the Cannabis Potency Test Results Report.

## Solvents Testing

Solvents testing refers to a method of analytically confirming the absence (or presence) of residual solvents in concentrates, extracts, or all other processed cannabis products. Refer to OAR 333-007-0410 for the list of solvents, for which a cannabis product must be tested as required by the State of Oregon.

PacLab Analytics® uses Gas Chromatography Tandem Mass Spectrometry (GCMS/MS) to quantitatively determine the concentration of residual solvents in cannabis products. GCMS/MS is a popular and powerful analytical technique for the separation, positive identification, and quantitative analyses of closely related chemical species. GCMS/MS combines the excellent separation capabilities of Gas Chromatography (GC) with the powerful capabilities of Mass Spectrometry (MS) to identify and quantitatively measure the concentration of unknown compounds. Gas Chromatography (coupled to a headspace autosampler) is particularly suited to volatile, thermally stable analytes; in the case of non-volatile analytes, additional sample preparation will be required.

Mass Spectrometry provides the capabilities to measure to trace levels (such as sub-parts per billion), to elucidate the chemical structure of molecules, and it only requires nanograms of sample material. The term "Tandem Mass Spectrometry" refers to a Mass Spectrometer design, also known as a Triple Quadrupole: dual mass analyzers with two quadrupoles and a collision cell in between. This Mass Spectrometer configuration is sometimes denoted as QqQ. Analysis by a Triple Quadrupole (or Triple Quad for short) produces cleaner spectra baseline, greater sensitivity — thus a lower limit of detection (LOD) — and an improvement in the S/N ratio and quantification.



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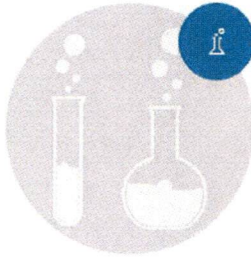
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## Pesticides Testing

Pesticides testing refers to a method of analytically confirming the absence (or presence) of pesticides in cannabis flower or processed cannabis products. Refer to OAR 333-007-0400 for the list of pesticides, for which a cannabis product must be tested as required by the State of Oregon. Refer to OAR 845-025-5700 and OAR 333-007-1000 for additional State of Oregon Pesticides Testing rules and requirements.

PacLab Analytics® uses both Liquid Chromatography Tandem Mass Spectrometry (LCMS/MS) and Gas Chromatography Tandem Mass Spectrometry (GCMS/MS) to quantitatively determine the concentration of pesticides in cannabis products. Like GCMS/MS, LCMS/MS also is a powerful analytical technique for the separation, positive identification, and quantitative analyses of closely related chemical species. LCMS/MS combines the excellent separation capabilities of Liquid Chromatography (LC) with the powerful capabilities of Mass Spectrometry (MS) to identify and quantitatively measure the concentration of unknown compounds.

Mass Spectrometry provides the capabilities to measure to trace levels (such as sub-parts per billion), to elucidate the chemical structure of molecules, and it only requires nanograms of sample material. The term "Tandem Mass Spectrometry" refers to a Mass Spectrometer design, also known as a Triple Quadrupole: dual mass analyzers with two quadrupoles and a collision cell in between. This Mass Spectrometer configuration is sometimes denoted as QqQ. Analysis by a Triple Quadrupole (or Triple Quad for short) produces cleaner spectra baseline, greater sensitivity — thus a lower limit of detection (LOD) — and an improvement in the S/N ratio and quantification.

Liquid Chromatography is particularly suited to the analysis of polar, thermally labile, non-volatile analytes. Analysis of less polar, thermally stable, volatile analytes can also be done by LCMS/MS but this requires Atmospheric Pressure Chemical Ionization (APCI). While GCMS/MS is not suited to polar, thermally labile, non-volatile analytes, when coupled with a headspace autosampler, it can be ideal for the analysis of volatile analytes. Together, these two analytical techniques cover the range of chemical properties found among the analytes on the list of pesticides, for which cannabis products must be tested in the State of Oregon.