

Case Study: THC Extraction and Botanical Research

PROJECT PROFILE:

Industry:
Cannabis

Location:
Clackamas, OR

Erlab Filtration Ecosystem:

- (3) Captair 483 Smart Ductless Fume Hoods
- (3) Halo Air Filtration Systems
- (3) Ministore 822 Chemical Storage Cabinets

Chemicals Used:

Butane
Ethyl Alcohol
Propane
Limonene
Cyclohexane
Formic Acid
Methanol
Acetone

Processes:

Evaporation
Mixing
Liquid Chromatography
Heating
Filtration
Extraction

THE SCOPE

An Oregon-based company was looking to become a fully compliant cannabis testing and extraction facility. The company uses Full Spectrum and Terp Testing, as well as Decarboxylation THC/CBD percentages. Their main products include BHO Shatter, BHO Distillate and Rosin. A new, larger warehouse was purchased and they wanted to be completely operational in just a few months. They needed a quick, easy way to turn their newly acquired facility into a safe lab space.



THE CHALLENGE

The new facility was large enough to house the small start-up company, all of the equipment needed, and room for growth. However, the space they occupy is connected to other suites and nuisance odors could be a concern. Furthermore, the building could not support the installation of additional ductwork needed for traditional ducted fume hoods. Because the distillate lab would be a converted office space located on the second floor of a shared building, turning it into a lab presented a unique set of challenges:

- Find a suitable fume hood, storage solution, and air filtration solution to protect the user from inhaling hazardous chemical fumes during a variety of complex chemical processes.
- The second-floor location makes transport of large equipment difficult.
- Over time, the lab's processes and equipment would change, so they required a fume hood that provided safety, could accommodate the variety of equipment used, and be easy to relocate.

THE SOLUTION

Erlab was able to provide a Filtration Ecosystem to convert the challenging space into a safe distillate lab and eliminate nuisance odors in the lab and throughout the building. The Filtration Ecosystem chosen for their lab is built with the following products that work together to keep the user safe and air in the lab clean:

- **Ductless Filtering Fume Hoods** - The chemistry involved is easily handled by Erlab's filtration technology that keeps users safe while they perform dangerous heating, evaporative, and chromatographic work. No requirement for ducting freed them from limitations and allowed the lab team the flexibility to place (or move) the hoods wherever they needed them.
- **Filtered Chemical Storage Cabinets** - the chemicals needed are conveniently stored close to the hood and Erlab's filtration technology eliminates exposure to noxious fumes escaping from stock bottles and containers.
- **Halo Air Filtration Systems** - The high volume of chemical processes outside of hoods and throughout the facility meant that air quality could be a concern not only for them, but also for their neighboring businesses. With Erlab's Halos, stray noxious odors and chemical fumes are safely eliminated.

One plus one equals three. By using Erlab's filtration products together to capture unwanted or hazardous fumes at the source made the safe, clean, flexible and energy-efficient lab space they wanted possible.

THE RESULT

- Guaranteed safety and total protection from chemical inhalation for end users
- Reduced construction and operational costs
- Simple set-up meant that the business could be fully operational in a shorter amount of time
- Equipment easily fit into a converted space, can be disassembled for any future moves or facility upgrades



Erlab's state of the art Research & Development Laboratory relies exclusively on filtration

About Erlab

We provide safety, we protect your health

Erlab invented the ductless fume hood in 1968. With more than 50 years of experience in the field of chemical filtration and protection of laboratory personnel; we know the formula for safety. With Erlab, you will never have to wonder or worry if our products are safe. We build each one of the following 7 ingredients into our products, and without all of them, your health and safety will be compromised.

1 Erlab R&D Laboratory

The engineers and chemists in our state-of-the-art R&D laboratory understand molecular filtration. We are committed to designing products that are safe and of the highest quality, strive to improve our products, and continuously develop new products that provide greater protection in the laboratory.

2 Strict Safety Standards

We hold ourselves to the highest standard and adhere to the strict AFNOR NF X 15-211: 2009 filtration safety standard as endorsed by ANSI Z9.5-2012.

3 A Published Chemical Listing

It all begins here. Without this listing, we are not compliant with AFNOR NFX 15-211. Our in-house laboratory tests, as well as independent testing, to verify the retention capacity of over 700 chemicals for our filters.

4 Independent Testing

Erlab filters have been independently tested multiple times at various concentrations guaranteeing that our safety solutions all adhere to the strict performance criteria of the AFNOR NF X 15-211:2009 standard assuring that the emission concentration at the filter exhaust will always be lower than 1% of the TLV.

5 Application Questionnaire (Valiquet)

Our laboratory specialists will recommend the appropriate filtration fume hood, type of filter, and personalized advice.

6 Certificate of Validation for the chemicals used in the hood

A certified PhD chemist issues a Certificate of Validation with a list of the chemicals approved for use in the hood.

7 Our Safety Program

We back up our products 100%. This program includes your specialized chemical evaluation, validation of your hood upon installation, and a filtration safety specialist at your service to ensure that your hood is operating to its full potential.

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2018 Celebrating 50 years
of innovation in filtration



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