



Myths and Misconceptions of the Ductless Fume Hoods

Myth:

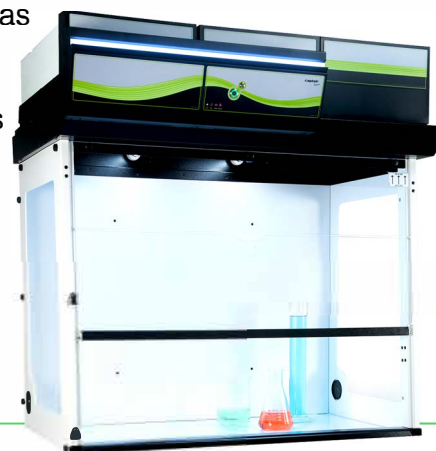
The filtered air is returned to the lab space and there are no guarantees that the filtration system will adequately remove the chemical contaminants.

Reality

Over 150,000 Erlab ductless fume hoods have been installed over the last 50 years without failure. Erlab performs rigorous testing of their media and more importantly, their filters. All testing performed is in adherence to the AFNOR NFX 15-211 standard, which ensures that the air exhausted is free from chemical emissions.

The AFNOR NFX 15-211 safety standard as referenced by the ANSI z9.5-2012 standard states that at normal operating phase, the concentration downstream of the filters exhaust must be less than 1 % of the TWA-PEL (Time-weighted average/ Permissible Expose Limit - which is up to a 10-hour work day during a 40-hour work week) set by ACGIH and referenced by OSHA for the life of the filter as determined through an extensive validation process.

Erlab's PhD chemists perform analysis for each customer's specific chemical handling's. A detailed report is then given to the customer stating the filter retention capacity, life cycle of the filter, and means of relevant chemical detection to measure the filters efficiency.



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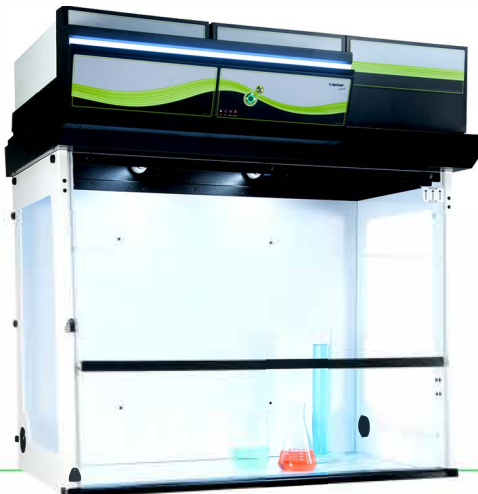
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Myth:

Some of the filters for ductless fume hoods cost a lot and must be disposed of as hazardous waste, which can become expensive.

Reality

Disposal of the filters falls within the normal PPE process (gloves and glasses). Because of the nature of adsorption and the process we use to improve the reaction between the media and the pollutants, the molecular adhesion is also improved. Release of any molecule during routine disposal will not occur and is proven with TCLP reports on used filters. Hazardous waste disposal is not necessary and proper disposal of filters cost ~\$45, per filter.



Due to the science within our filters, the average filter life cycle is 18 months. The replacement filters range from \$430 - \$700. Annualized with filter disposal, the cost of ownership for a 6' Erlab ductless filtering fume hood is \$1,599 as compared to ~\$5,000 in energy costs alone for a ducted fume hood.

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Myth:

Determining which filter to use in the hood is often difficult because it is dependent upon chemical use.

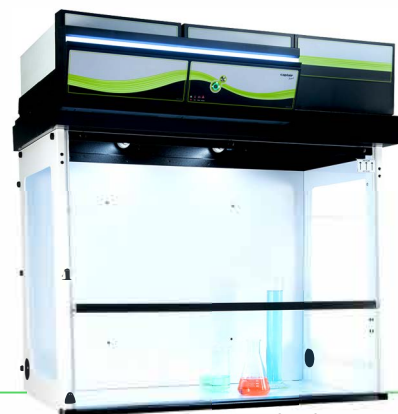
Reality

Erlab's eValiQuest, a web based platform, makes this determination simple. The customer is guided through their process and chemical handlings, and is provided real-time data for the appropriate filters and configurations pertaining to their specific application. Erlab's PhD chemists then perform an analysis to meet client needs and a detailed report is presented with the following results:

- ❖ Selection of the appropriate filter type for your chemicals
- ❖ Proper configuration of the filtration column for the chemicals used in your hood
- ❖ Filter retention capacity
- ❖ Proper means of breakthrough detection

Manufacturers of ductless fume hoods must provide a certified list of chemicals that the filters are able to retain under the conditions described in the AFNOR NFX 15-211: 2009 standard. Erlab provides a Chemical Listing Booklet of 700 chemicals with the following information for each one:

- ❖ The chemical name, its formula, its CAS number, its boiling point, its molecular weight, and its saturation vapor pressure
- ❖ The appropriate filter reference and its retention capacity during the normal operation phase
- ❖ The type of saturation detection system for the filter(s)
- ❖ The maximum quantity of the chemical that can be introduced with the hood
- ❖ The name of the test laboratory that performed the testing



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Erlab's State of the Art Research and Develop Laboratory

About Erlab

Inventor of the ductless laboratory fume hood and worldwide leader since 1968, Erlab's passion is to focus on the research and development, design, and manufacturing of cutting-edge toxic gas air filtration in the laboratory.

As an innovator, Erlab is committed to safety, performance, energy efficiency, and sustainability, and has remained number one in the world for ductless fume hoods.

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Experts in air filtration for the protection of laboratory personnel