



Experts in air filtration for the protection
of laboratory personnel since 1968

Case Study: Marywood University

PROJECT PROFILE:

Type:
Renovation

Location:
Marywood University
Center for Natural & Health
Sciences Building
Scranton, PA

Filtered Fume Hoods:
Thermo Scientific
Infinity featuring Erlab
GreenFumeHood Technology

Statistics:
Completion Date: October
2012
Square Footage: 2,200
Project Cost: \$3,200,000
Construction Cost: \$1,800,000
Cost per SqFt: \$600

Architect:
Ellenzweig

Construction Manager:
Reuther+Brown

Laboratory Consultants:
MEP Engineering

THE SCOPE

The 2,200-SF renovation of the organic chemistry labs at Marywood University's Center for Natural and Health Sciences Building includes three areas: a 16-student organic chemistry teaching lab with (8) filtered fume hoods, an eight-student organic chemistry research lab with conventional ducted hoods, and a dedicated laboratory preparation and support space, also equipped with ducted hoods.



THE CHALLENGE

The low floor-to-floor height on the top floor, where the labs are located, limited available mechanical capacity within the existing infrastructure, and fume-hood-intensive laboratories were at odds with the project budget. After an extensive chemical compatibility and life cycle analysis, it was decided that the filtered fume hood would be a safe and cost effective alternative to traditional fume hoods in the teaching lab.

THE SOLUTION

Eight Thermo Scientific Infinity filtered fume hoods utilizing Erlab's GreenFumeHood Technology were installed in the teaching lab. The filtered fume hoods are not tethered to ductwork and provide several advantages over conventional ducted fume hoods for Marywood University's science department:

1. Reduction of initial capital investment and engineered infrastructure
2. Erlab's patented Neutrodine filter technology captures and retains high volumes of hazardous chemicals while returning clean air back to the lab.
3. The filters are easy to replace. The used filters are disposed of in an environmentally safe manner.
4. Long-term flexibility of use, environmental benefits, and significant energy cost savings.

THE RESULT

- Lower first capital cost because filtered fume hoods do not require expensive HVAC exhaust or make-up air systems.
- 25 – 30% reduction in HVAC load resulting in less demand on the building's existing systems.
- Eight filtered fume hoods that are used 40 hours a week save approximately 100,000 kWh and \$10,000 annually.



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

North America
+1 800-964-4434 | captairsales@erlab.com

China
+86 (0) 512 5781 4085 | sales.china@erlab.com.cn

France
+33 (0) 2 32 09 55 80 | ventes@erlab.net

Germany
0800 330 47 31 | verkauf@erlab.net

Italy
+39 (0) 2 89 00 771 | vendite@erlab.net

Malaysia
+60 (0) 7 3 555 724 | erlab@tm.net.my

Spain
+34 93 673 24 74 | ventas@erlab.net

United Kingdom
+44 (0) 1722 341 940 | salesuk@erlab.net

www.erlab.com

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 (Valiquest)

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.



2018 Celebrating 50 years
of innovation in filtration

