

## 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 relying exclusively on filtration

#### North America

+1 800-964-4434 | [captairsales@erlab.com](mailto:captairsales@erlab.com)

#### China

+86 (0) 512 5781 4085 | [sales.china@erlab.com.cn](mailto:sales.china@erlab.com.cn)

#### France

+33 (0) 2 32 09 55 80 | [ventes@erlab.net](mailto:ventes@erlab.net)

#### Germany

0800 330 47 31 | [verkauf@erlab.net](mailto:verkauf@erlab.net)

#### Italy

+39 (0) 2 89 00 771 | [vendite@erlab.net](mailto:vendite@erlab.net)

#### Malaysia

+60 (0) 7 3 555 724 | [erlab@tm.net.my](mailto:erlab@tm.net.my)

#### Spain

+34 93 673 24 74 | [ventas@erlab.net](mailto:ventas@erlab.net)

#### United Kingdom

+44 (0) 1722 341 940 | [salesuk@erlab.net](mailto:salesuk@erlab.net)

[www.erlab.com](http://www.erlab.com)

## About Erlab

### We provide safety, we protect your health

Erlab invented the ductless fume hood in 1968. With more than 45 years of experience in the field of chemical filtration and protection of laboratory personnel, and we know the formula for safety. 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 and continuously work to ensure our products are safe, constantly innovating to improve our products, and developing new products to ensure 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 recognized by ANSI Z9.5-2012.

#### 3 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 emissions concentration at the filter exhaust will always be lower than 1% of the TLV.

#### 4 A Published Chemical Listing

Independent testing verifies the retention capacity of over 700 chemicals for our filters.

#### 5 Application Questionnaire

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 your filtration safety specialist that ensures your hood is operating to its full potential.