



Industry:

Manufacturing of agrochemical products
300 m² laboratory
9 chemists

Project:

Change of use of a tertiary building to accommodate a research and development (R&D) laboratory

Architect:

VAN LOOY, Anvers (BE)

Location:

Mons-St-Guibert, BE

Erlab ecosystem:

5 GFH
1 GFH walk-in

Integration partner:

VINITEX, NL

Chemicals used:

Acetone
Xylene
Aromatic solvents
Essential oils
Pesticides
Fertilizer

Process:

Mixing
Evaporation
Heating
Grinding
Seed coating
Formulation

CASE STUDY

Technology

GreenFumeHood® 3

Resolving an insufficient number of fume cupboards in a laboratory while ensuring the efficiency of Erlab filtration, both for personnel and the external environment?

FRAMEWORK

Ajinomoto Omnicem formulates pesticides and produces surfactants for other manufacturers (Clients include Bayer and Syngenta).

The project consisted of the installation of an agrochemical laboratory, performing R&D, formulation and chemical synthesis.

This laboratory was to be located in a rented building previously used as office space and a medical analysis laboratory.

Ajinomoto Omnicem was assisted in this project by the architecture firm Van Looy, which proposed a solution that met the safety, efficiency, design and ergonomic needs, in accordance with the 5S* method.

* A management technique to ensure continuous improvement.



CHALLENGE AND CONSTRAINTS

The site is located in a business district where companies from different sectors work alongside each other. It was important that the highly odorous and potentially toxic products handled had no impact on staff and the environment, nor on the comfort of neighbouring businesses.

The existing ventilation system in the building only allowed for the operation of five extraction fume cupboards, which is insufficient for the laboratory's operational needs.

The possibilities for modifying the ventilation were limited by the fact that the building is rented. It was therefore important to find an alternative solution to increase the number of fume cupboards and thus meet the needs of the operators to perform their handling.

Ajinomoto Omnichem was reluctant to use filtration-based solutions because of a previous negative experience with a "home-made" fume hood that was not efficient.

SOLUTION

Erlab and its integration partner Vinitex, a Dutch manufacturer of laboratory furniture, proposed recirculating fume cupboards using **GreenFumeHood (GFH) filtration technology** for this new laboratory.

These recirculating fume cupboards, which do not require connection to the building's ventilation system, could be installed without construction work to meet the needs of this R&D laboratory.

Ajinomoto Omnichem is now convinced of the effectiveness of **Erlab filtration**, thanks to the **Erlab Safety Program***, which includes a chemical hazard analysis in advance of the project, as well as **Erlab's** knowledge and past achievements with clients who also use highly odorous products** (such as the company Bridgestone).

Ajinomoto Omnichem is already familiar with furniture manufactured by Vinitex, which was used for a previously installed project. It offers a harmonious and consistent design for the whole laboratory.

***(Formulation of rubber for tire manufacturing)*



RESULT

In September 2017, Vinitex installed five GFH recirculating fume cupboards in the laboratory. A GFH Walk-in* recirculating fume cupboard was also installed in the basement, for use when weighing odorous powders in large quantities.

* A fume cupboard without a work surface with an opening from floor to ceiling.



This solution achieved:

- Installation of a laboratory meeting the client's operational and ergonomic needs
- Fast set-up for recirculating fume cupboards for an operational laboratory in less time than expected
- Options for future relocation or reorganization of spaces
- A showcase laboratory with a harmonious design, open for Ajinomoto clients to visit
- Respect for the neighbourhood and the environment

FEEDBACK AFTER FIVE YEARS OF USE:

Strong odours persisted after Ajinomoto moved into the new laboratory. It was found that some chemicals were handled under suction arms and that these were ineffective. Handling of these products was moved to the **GFH** recirculating fume cupboards and the odours disappeared immediately.

Ajinomoto's reluctance to use filtration has been completely dispelled. They were first reassured by the **Erlab Safety Program**, which guided them in choosing a safe and appropriate solution, and then by Vinitex's support in setting up **GFH** recirculating fume cupboards, and their day-to-day efficiency. They are now convinced of the benefits of filtration and have the same level of confidence in their various fume cupboards, whether they use recirculation or extraction

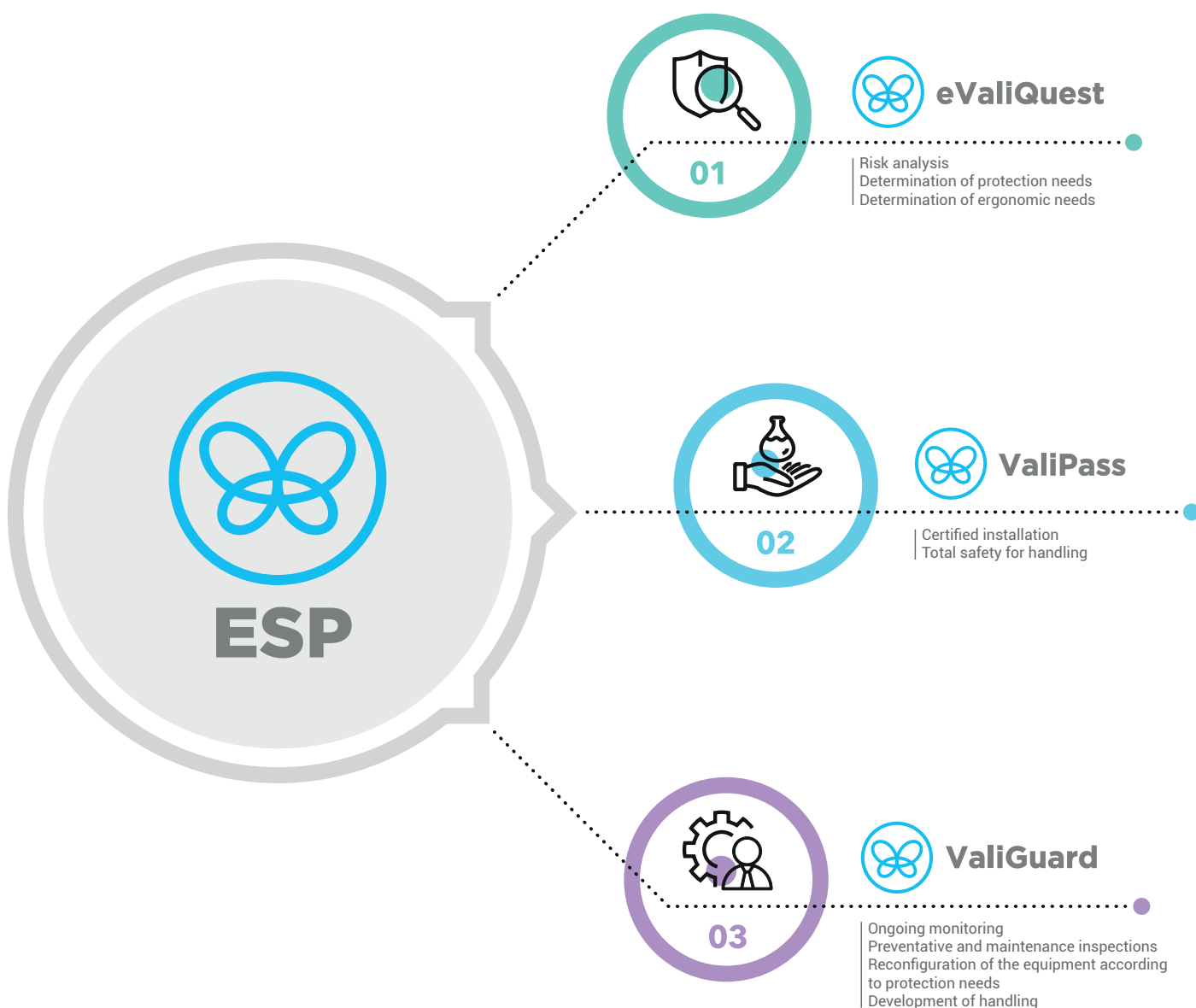
*ERLAB SAFETY PROGRAM

WHAT IS THE ERLAB SAFETY PROGRAM ?

Erlab's lasting commitment to your safety.

Erlab's R&D laboratory analyses the interactions between molecules and validates the filtration technology adapted to your handling. Based on this scientific analysis, our laboratory recommends the type of equipment, filtration column configuration and enclosure size that will ensure your protection.

Contact your **ESP** specialist today to set up your Erlab protection solution.



ERLAB SAFETY PROGRAM



eValiQuest

With the help of an ESP agent, you fill out the investigation questionnaire to precisely describe the handling you plan to do. Within 48 hours, our laboratory specialists will propose a type of equipment and a filtration technology solution corresponding to your use. We are committed to ensuring your protection by certifying the feasibility of your handling.



ValiPass

When your fume hood is installed, a usage certificate will specify the chemicals used, the type of filter and the estimated life span for which your equipment has been validated. This certificate provides a permanent reminder about the equipment use for the user or the safety officer.



ValiGuard

The ESP[®] agent will contact you periodically to ensure that your handling has not changed and that the filter is still effective. The agent will also give you step-by-step instructions on how to conduct filter fault tests and information on the replacement procedure. If a change in handling is noted, the ESP[®] agent will invite you to complete a new questionnaire (see step 1). After review, a new usage certificate stating the authorized chemicals will be sent to you to ensure optimal safety conditions for handling.



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 (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.

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