



**Tefal®**

**Company:**

Groupe SEB  
Non-stick coatings for cookware 1,500 m2  
laboratory 1,700 people  
on site 40 chemists in the laboratory

**Project:**

Creation of an R&D laboratory in a new building

**Architect:**

PATRIARCHE,  
Bourget-Du-Lac (73)

**Location:**

RUMILLY-74, France

**Erlab ecosystem:**

10 GreenFumeHoods (GFH)

**Integration partner:**

BURDINOLA, ES

**Handling:**

Coating formulation  
Grinding

# CASE STUDY

Technology

**GreenFumeHood® 3**

**Completing a laboratory project balancing the requirements of the building's ventilation and the budget while improving user safety?**

## FRAMEWORK

**Tefal** created a new 1,500 m2 R&D laboratory in a new three-storey building to carry out research, formulation and physical characterization activities for non-stick coatings.

Tefal was assisted by the architecture firm Patriarche, which oversaw the project from planning to delivery of the building.

Bureau Veritas was in charge of safety expertise.



## CHALLENGE AND CONSTRAINTS

Tefal conducted a risk analysis to determine the number of fume cupboards needed for the new laboratory. This analysis revealed that the planned ventilation system did not allow for the installation of a sufficient number of fume cupboards, as the building's extractions had been undersized despite the substantial investment.

## SOLUTION

**Erlab** conducted a chemical hazard analysis ahead of the manipulations to be carried out in the laboratory to propose the best protection solution for the client's needs. This service is part of the **ESP\***.

**La technologie GreenFumeHood (GFH)** is a solution that is perfectly adapted to **Tefal's** expectations and constraints.

GFH recirculating fume cupboards incorporate versatile Neutrodine Unisorb filters, offering users maximum flexibility in their daily practices, both in terms of the diversity of handling and the ergonomics of their equipment. Above all, they have no impact on the building ventilation (**HVAC\***) as they are not connected to an extraction system.

Additionally, fume cupboards equipped with **GFH** technology comply with the most stringent standards for total user protection, such as **EN 14 175-3 and NFX 15-211:2009**.

**Furniture manufacturer Burdinola, integration partner for Erlab technology, installed a global solution in their laboratory, including 10 GFH recirculation fume cupboards in addition to three extraction fume cupboards.**

*\* Heating, Ventilation and Air Conditioning*



## RESULT

Laboratory personnel now have a sufficient number of fume cupboards to carry out all their handling in complete safety.

**Thanks to the installation of filtration fume cupboards, the volume of air treated in the building was reduced, while maintaining an air change rate of seven changes per hour.** The building uses less energy and operating costs have been reduced. **As a result, the number of air handling units was reduced from seven to four,** freeing up space and reducing air handling costs by approximately €1.2 million. The return on investment is estimated at two years.

### This solution achieved:

- Creation of a functional laboratory, within the constraints of the building and costs.
- Guaranteed safety and protection for users.
- Fast set-up for recirculation fume cupboards in less time than expected.
- Options for future relocation or reorganization of spaces.
- Significant reduction of infrastructure and operating costs.
- Sufficient number of fume cupboards to meet users' needs.



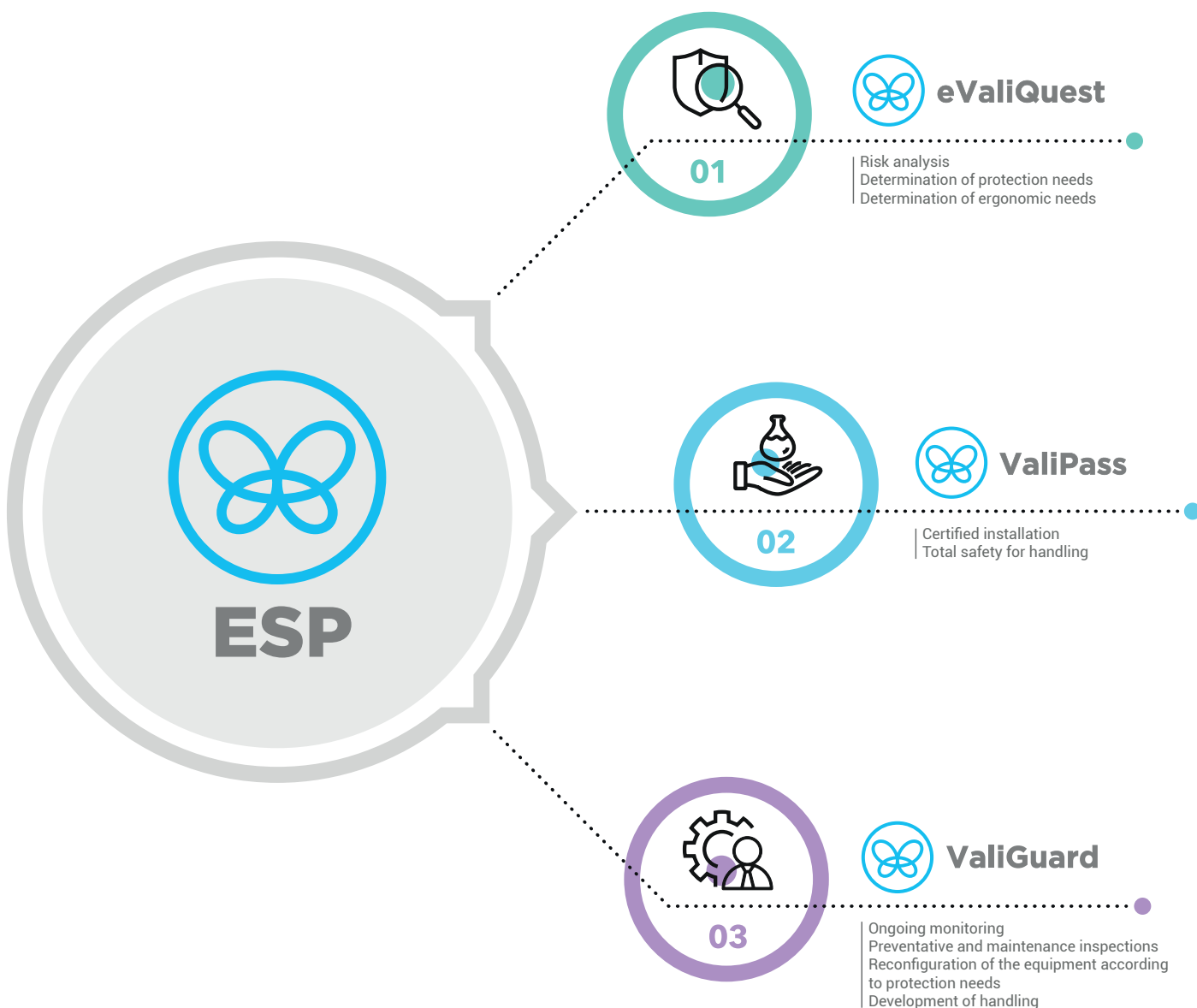
### \*ERLAB SAFETY PROGRAM

## 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<sup>®</sup> 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<sup>®</sup> 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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