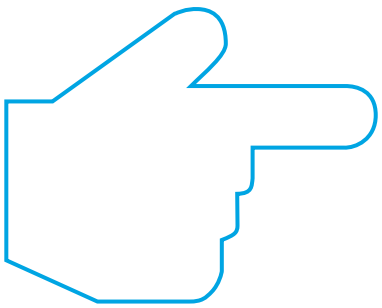
The Cruma FILTRATION FUME HOODS

Cruma manufactures two ranges of ductless filtering fume hoods: Cruma Classic and Cruma Plug&Play.

Ductless fume hoods of the **Classic** range have been designed and recently re stylized to be located anywhere: they are delivered unassembled so that they can be assembled easily in any laboratory where the access is difficult (steps or narrow doors, staircases, etc).

Ductless fume Hood of **Plug&Play** range have been designed to be used immediately without having to assemble them: simply remove them from their fantastic packaging, place them in the desired location and plug them to enjoy them. As simple as its definition follows: plug and play.

All Cruma ductless fume hoods use the **new filtration system**, developed and patented by Cruma, to retain the pollutant gases and vapors generated inside the cabinet, constantly renewing laboratory air, attributing a number of advantages:



Protection of and respect for the environment

–The toxic chemical products are not released outside but retained within the filter.

Flexible

–It can be used in areas where it is difficult to remove/extract contaminated air, such as from the lower levels in buildings that have a number of floors.

Cost savings and fast set up

–No building work is needed to install ducts to channel the gas outside, which means fewer problems for a laboratory working at full capacity.

Energy savings

–The air that is sucked in is not expelled but recirculated back into the lab after the contaminating substances have been removed. This means that it is not necessary to increase the use of the air-conditioning or heating systems to compensate for the air removed.

GLOVE BOX AUSTRALIA

Is a filtration fume hood... THE BEST CHOICE FOR MY JOB?

Even when dealing with a compound that can be adsorbed by active carbon, there are a number of factors such as concentration, amount used, conditions in terms of temperature and humidity, how often the work is carried out, the environmental limit values, etc., as well as any combination of these, that should be taken into consideration and duly studied as they have a direct bearing on the operator's safety and the filter's useful life.

Thus, in the vast majority of cases, when choosing the ideal fume hood and filter for a specific application it will be necessary to consult a qualified specialist technician.

For this purpose **Cruma has a form** (see the flow chart) available on demand. Here the user can describe the chemical products used and the parameters related to the type of operation in question so that Cruma can advise them as regards the best available option.

CRUMALAB

1. CLIENT FILLS OUT AND SUBMITS THE FORM

2. CRUMA TECHNICAL SPECIALISTS ANALYZE THE INFORMATION

3. OUR TEST LABORATORY DETERMINES WHETHER THE APPLICATION IS VALID FOR A RECIRCULATION FUME HOOD

4. A RESPONSE IS ISSUED

5. SALE OF THE EQUIPMENT THROUGH AN AUTHORIZED DEALER

6. POSSIBILITY OF INSTALLATION AND ASSEMBLY

7. A VALIDATION CERTIFICATE IS ISSUED*

*WHEN THE EQUIPMENT IS INSTALLED BY CRUMA

CRUMASAT

CRUMA HELPDESK TEAM ENSURES ANNUAL MONITORING, IT INCLUDES:

8. REVIEW THE CORRECT CONDITION AND OPERATION OF THE FUME HOOD

9. FILTER CHANGE

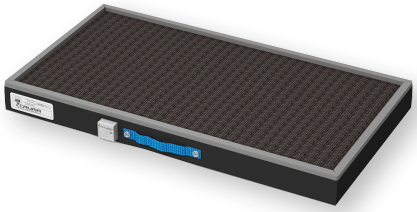
Likewise, and to serve as a guideline, Cruma can also provide a **list of adsorbable chemical products***, categorized according to the appropriate type of active carbon filter to be used, indicating:

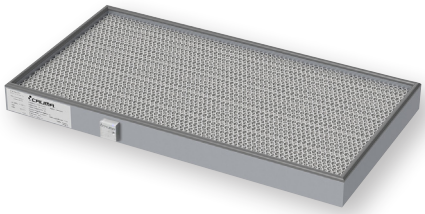
- **Physical properties**
- **Hazard statements and risk and safety phrases**
- **Warning regarding carcinogenic substances TLV, ELV and IDHL values**
- **Odour thresholds**
- **Appropriate filter type**
- **Approximate retention capacity**

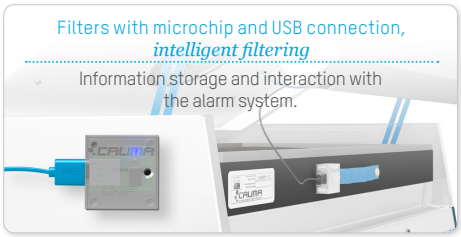
CRUMA active carbon filters AVAILABLE

The patented Cruma filtration system is based on the ***adsorption*** *phenomenon.*

The filters supplied by Cruma are manufactured using active carbon that comes from the shells of coconuts, as this type has the greatest proportion of micropores, which makes it the best choice when adsorbing gas contaminants. There are six types of filters and these are used in different combinations giving us a total of 15 different types (e.g.: AD, BED, FD, etc.):







MODULAR FILTRATION COLUMN FOR GASES AND PARTICLES (according to NFX 15-211:2009)

CLASS 2		CLASS 1	
Type G Handling of liquid compounds/products		**Type 2G** Liquid compounds/ products handling with security molecular filter	
Type GS Handling of liquid and particles compounds/ products		**Type 2GS** Liquid and particles compounds/products handling with molecular security filter	
		Type 2GD Handling of liquid compounds in clean room with molecular security filter	

FILTRATION COLUMN FOR POWDERS

Type D Handling of powder compounds	
Type DD Handling of powder compounds in clean room	
Type 2DD Handling of powder and molecular compounds in clean room with molecular security filter	

Fan

Molecular Filter

HEPA-H14 Filter

A

General use filter, especially appropriate for **organic fumes**, such as ketons, ethers, alcohols, xylenes, etc. These can be used with inorganic acids, but only if these are not too abundant, as the active carbon has not been impregnated and any excess acid fumes will quickly saturate it.

BE

For **inorganic acid fumes** such as: H_2SO_4, HCl, HNO_3, as well as for volatile sulphur compounds such as H_2S, SO_3, etc. These filters can be used with organic fumes as the active carbon has been impregnated with metal compounds and neutralizing salts. They can be used with both organic and inorganic fumes provided these are present in similar proportions.

F

For **formaldehyde and formol fumes and their derivatives**; can also be used with other organic compounds. Carbon is impregnated with KI, and, as such, should never be used with inorganic acid fumes.

K

For **NH_3 fumes and amines**; also useful for other organic compounds. The carbon is impregnated with metal salt complexes.

ABEK

Mixed type to be used when the proportions between **organic**, **inorganic** and **NH_3/amines** are similar.

D

HEPA H-14 (High Efficiency Particulate Airfilter) with an efficiency rate of 99.995% for particles of 0.3 µm (a maximum particle penetration). Recommended for more complicated applications that generate a great deal of dust, fumes and/or aerosols and that require a high degree of protection. **This filter can be combined with any of the aforementioned depending on the requirements of the job in question.**