



Protecting your  
laboratory environment

**LABCONCO**<sup>®</sup>

LABCONCO CORPORATION  
8811 Prospect Avenue  
Kansas City, MO 64132-2696

(816) 333-8811 • (800) 821-5525  
FAX: (816) 363-0130  
www.labconco.com

## CARBON FILTERED ENCLOSURE PROFILE REPORT

This report has been specifically generated for:

**Contact:** Dr. Jane Doe

**Company:** XYZ Corporation

**Address:** 1234 Main Street, Anywhere, USA

**Phone:** 555-555-5555

**Email:** janedoe@xyz.com

**Date:** 3/16/10

**Dear Dr. Doe,**

The following profile is in response to the information supplied by you with regards to your application. The conclusion is based on the following information:

**Chemical(s)/agents to be used:** Glutaraldehyde

**Evaporation/Usage Rates:** Soaking tray 29" x 8.5" x 5/5" with 2 Liters of glutaraldehyde during an 8 hours use exposed for 25% of the time.

**Temperature:** Room temperature

### **APPLICATION ANALYSIS AND DISCUSSION:**

The chemicals/agents provided were reviewed to determine if they are suitable for use in a Labconco Carbon Filtered Enclosure, based on the chemical properties themselves.

Labconco recommends that all chemicals intended to be used in a Carbon Filtered Enclosure be used in concentrations that are less than the exposure limit of the chemical for maximum safety, which typically refers to the amount of a chemical a person can be exposed to within an 8-10 hour day before it is considered harmful to the individual.

The assessment for each chemical is listed below. Each chemical is listed with a filter recommendation, a filter recommendation with precautions if indicated, or a non-approval listing with reasons provided if it is recommended to be used in a standard ducted Chemical Fume Hood instead of a Carbon-Filtered Enclosure.

Glutaraldehyde- Organic Filter, low odor threshold

**The Paramount Filtered Enclosure can be approved for your application with the use of the Organic Filters, with chemical precautions noted.**

**PLEASE NOTE the following guidelines:**

1. Labconco discourages the use of forced evaporations to be carried out within a Carbon Filtered Enclosure. This process would not only affect the proper airflow required, but it would also affect the life of the filter, and its efficiency, and possibly damage the HEPA Filter (if being used). In standard applications, forced evaporation refers to heating a chemical to its boiling temperature. In addition to this, condensate may form on the inside of the enclosure depending on the evaporation rate.
2. If your application is being carried out in a clean room, you will want to consider using a set of HEPA Filters placed above a set of Carbon Filters, to capture any carbon media that may be released by the Carbon Filters before the air is recirculated back into the room.
3. If your application is located in a general laboratory setting, and you are using both powders and liquid chemicals, you will want to place the HEPA Filters below the set of Carbon Filters to filter out the powders/particulates to prevent them from using up valuable carbon media space on the Carbon Filters.
4. If you are using acids for an application that also requires HEPA Filters, you will want to place the Acid Filters first so that you filter out the corrosive acids to prevent it from possibly doing any damage to the HEPA Filters.

**FILTER LIFE**

The filters do have an estimated capacity to hold various organics and chemicals of focus, and the specific capacities for the chemicals involved in your application are as follows:

Glutaraldehyde- 3% Filter weight capacity, ~ 35mls retained on a single Organic Filter

Note that each Paramount requires at least two filters, and the number of filters required for each Paramount varies depending upon the size of the unit, so the overall chemical volume retained on the filters should be calculated accurately, depending upon which size of Paramount you are considering, and how many filters it can accommodate.

The values are theoretical values supplied by the activated carbon manufacturer based on a 10PPM concentration. Higher concentrations would result in a greater filter capacity and lower concentrations would result in a lower filter capacity. Also, the values listed are not representative of the cumulative use of the chemicals with one filter set, so usage of several different chemicals within the enclosure will result in a lesser value for each chemical.

**RECOMMENDED DETECTION METHOD(S):**

The Paramount Filtered Enclosure has a Filter Breakthrough Alarm for organics that will provide an audible and visual alert when a chemical filter breakthrough is occurring. The use of detector tubes and a syringe kit is another way of monitoring the filter status of the Paramount Filtered Enclosure, which is necessary for monitoring the treated Carbon (Ammonia, Acid/Sulfur and Formaldehyde). Filter status since the Filter Breakthrough Alarm works only for organics. This allows you to test the exhaust air of the Paramount or the air gap between the two stacks of filters to determine if chemical breakthrough is occurring. If you are using organics, you will need to purchase the

detector tubes specific to the chemical(s) that you are using, from your laboratory supply company. Labconco offers the specific detector tubes for Ammonia/Amines, Acids/Sulfur gases and for Formaldehyde/Formalin or they can also be purchased from your laboratory supply company.

We recommend that the filters be checked at least every 20% of the estimated filter life (10% with the use of Formaldehyde), which is what you would program the filter check alarm for on the Paramount. Since you will be using only an estimate, it would be useful to check the filters, and record the total length of the filter life. You could then use this as a standard to set the replacement filter's check times.

**ORDERING INFORMATION:**

The catalog numbers for the specific filters that have been recommended are:  
6938200      Organic Filter Cells

The Paramount Filtered Enclosure comes in a variety of sizes and configurations to accommodate most lab settings. Varying widths of the Paramount require a different number of filters. So be sure to order the correct number of filters for the Paramount that you may be ordering. Base stands, base cabinets and work surfaces as well as other accessories are also available.

**CONCLUSION:**

The Paramount Filtered Enclosure has been approved for your overall application with the use of the Organic Filters.

The information provided in this report is only relevant to the chemical(s) and information provided for this particular application. Any changes in application or chemical usage require additional evaluation.

Please contact me at ph: 800-821-5525, ext. 791, if you have any questions regarding this report. The Labconco Sales Rep for your area is Mr. Sales Rep, and he can be reached at ph: 800-821-6699, ext. 555. He will be receiving a copy of this report, and will be following up with you in the near future. Thank you for your interest in Labconco products.

Sincerely,



Diane Williamson, Technical Specialist