



LABCONCO CORPORATION, 8811 PROSPECT, KANSAS CITY, MO. 64132, 816—333-8811

INSTRUCTION MANUAL
LABCONCO FUME ADSORBER
MODELS 69000, 69200

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LABCONCO CORPORATION, 8811 PROSPECT, KANSAS CITY, MO. 64132, 816—333-8811

Dear Customer:

This letter is to insure that you get the best performance from your new Labconco product. We want to be sure you are satisfied. If damage has occurred in shipping, the customer must file a claim with the carrier IMMEDIATELY! DO NOT return any items to Labconco Corporation without written authorization from the factory. Your local laboratory apparatus dealer can assist you, and should be contacted if problems occur. If satisfaction is not obtained, contact Labconco Corporation.

We know that even the best products require service from time to time. So if this is ever true of your Labconco product, call the service department of the dealer from whom you purchased the unit. He is trained to make whatever might be wrong with your unit right. If you need additional help, call us at (816) 333-8811 and ask for our Service Manager. We will make sure that you get all the help you need.

We suggest you keep this letter with your instruction manual. It's nice to know you are protected, even though you may never need it.

Sincerely,

LABCONCO CORPORATION

Enclosure

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I. Introduction:

A. General Description:

The LABCONCO Fume Adsorber provides a spacious enclosed work station for histology and cytology procedures, and other laboratory operations in which noxious odors and harmful vapors are produced.

Annoying vapors, such as xylene or toluene fumes used in cover-slipping operations, are removed quickly and efficiently by the Fume Adsorber's activated carbon filter.

Solvent vapors are trapped in the capillary-like channels of the carbon filter, while clean air is recirculated into the laboratory. No venting or ducting is necessary.

B. Warning - Applications:

It is important to note that the Fume Adsorber is not intended for use as a general purpose laboratory hood. Since Adsorption is used to trap vapors rather than discharging them to the building exterior, special consideration must be given to the procedures performed in the Fume Adsorber. It is a specialized enclosure that should have the approval of the local laboratory safety officer or careful pre-evaluation by the responsible technician before use.

For example, the Fume Adsorber is not for use with Pathogenic hazards, because the filters were not designed for this purpose. Careful consideration was given to the size of the Fume Adsorber. Its size, by design, is limiting in order to preclude its use for certain laboratory procedures. The use of hot plates, distillation apparatus, or other similar equipment is not recommended. This type of equipment should generally indicate use of a laboratory type hood.

Refer to Section III, normal operation for some technical notes. If there are any questions regarding the use of this enclosure, contact Labconco Corporation.

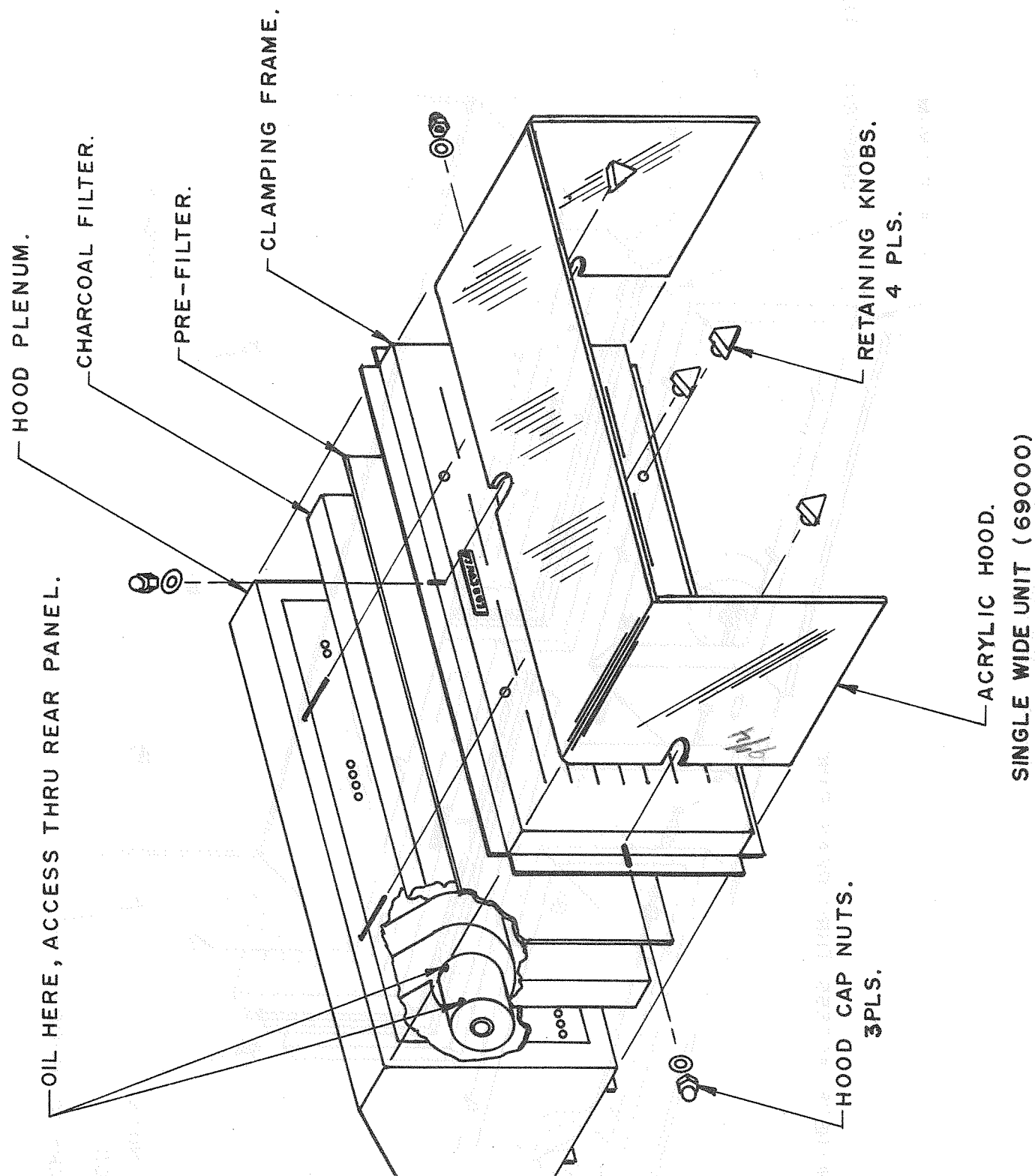
C. Labeled Diagram of Unit:

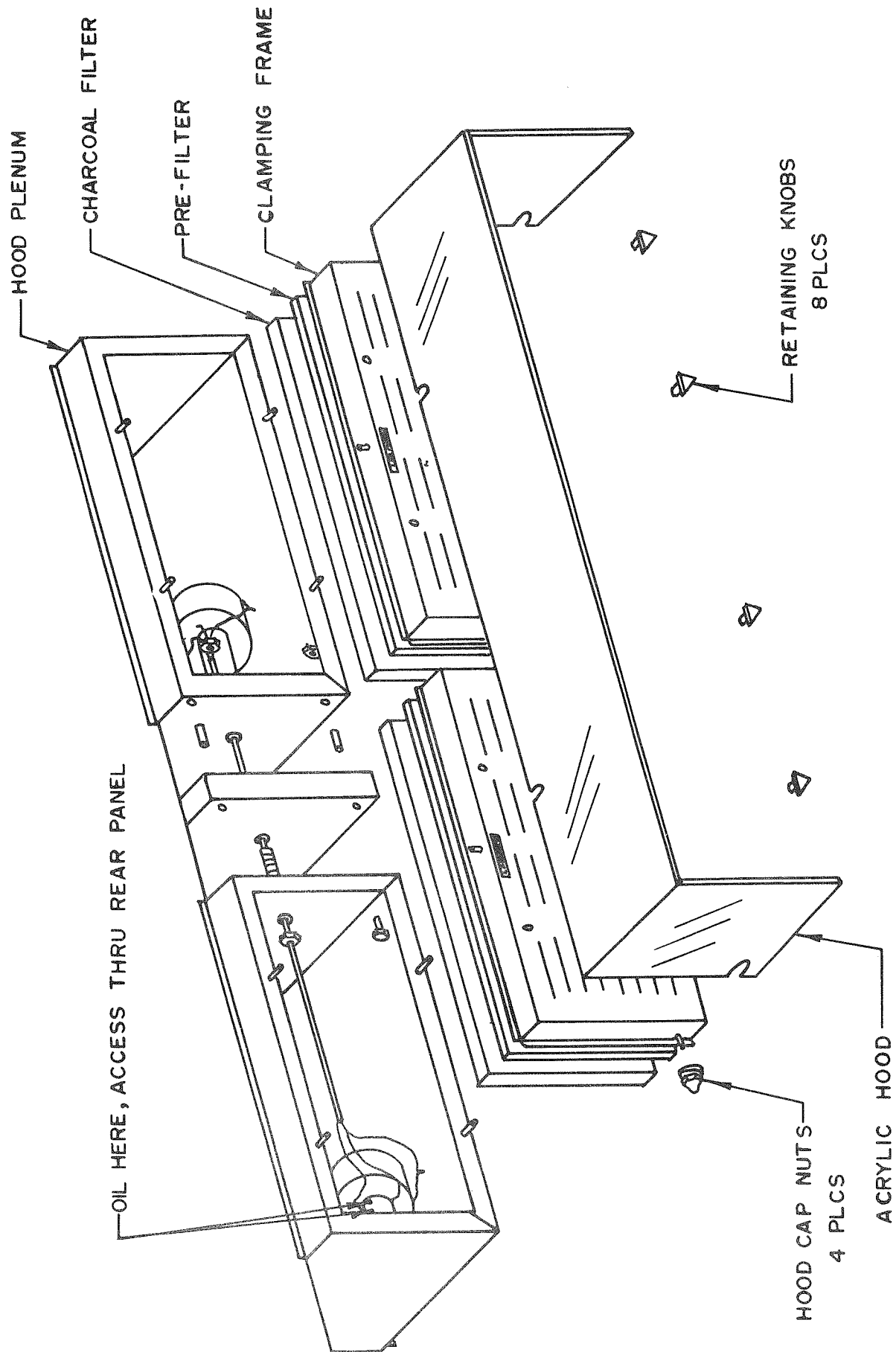
(See Pages 2 & 3)

II. Installation:

A. Specifications:

The dimensions are 27-5/8" l x 19-5/8" d x 12 1/4" h, for a single unit and 55 3/4" l x 19 5/8" d x 12 1/4" h for a two wide unit. It operates on 115 volt, 50/60 Hz, 0.7 amps per blower. The integral motor/blower shall provide velocity of 25 fpm (55 cfm) @ 60 Hz. (110 CFM on the 2 Wide Unit)





TWO WIDE UNIT (69200)

The unit includes replaceable 6 pound activated carbon filters, 26" x 1" x 10½" h, to retain chemical and solvent fumes. The motor/blower and carbon filters are housed in separate compartments in an epoxy coated steel cell, louvered in front for efficient air flow.

The enclosure is clear, one-piece shatter resistant acrylic, ¼" thick. It is complete with wiring, switch, 11 ft. grounded cord and plug. The shipping weights are 45 lbs. for the 69000 and 90 lbs. for the 69200.

B. Installation Instructions:

1. Location:

The unit may be located anywhere a standard electrical receptacle is found.

2. Connections:

- a. Carefully remove packing containing acrylic hood. Remove hood from packing.
- b. Lift out Adsorber superstructure and place on flat surface.
- c. Inspect for shipping damage.

Caution: If damage has occurred, the customer must file claim with the carrier IMMEDIATELY! DO NOT return any item to LABCONCO CORPORATION without authorization from the factory. Your local Laboratory Apparatus Dealer can assist you and should be contacted if problems occur.

- d. Insure that each filter element is properly compressed by testing the four filter compression knobs for hand snugness.
- e. Install hood to superstructure by aligning hood slots with louvered filter frame studs.
- f. Decide whether space available requires use of the adsorber with the filter and superstructure setting on top of the hood. If so, cinch the cap nuts on the frame studs fairly tightly and lift the assembly as a unit into position. If, instead, the superstructure can rest on the work surface, you may wish to leave the cap nuts loose.
- g. The standard Adsorber is wired internally for 115V 50/60 Hz current and is provided with a polarized power cord for connection to the power source. Current requirements are less than one amp.

3. Start-Up and Check-Out:

Turn unit on before placing anything under the hood to insure proper operation of the blower.

III. Normal Operation:

Technical Notes:

Each Fume Adsorber filter element contains six pounds of high grade (Type AC) activated charcoal, and has the capacity to remove from the air many types of odiferous vapors. Its primary strength is in the removal of organic vapors with boiling points above room temperature, including essential oils, solvents, organic intermediates, and organic waste materials.

The filter will hold 20% to 50% of its own weight of these vapors down to levels undetectable by the sense of smell. Since in general, concentrations of adsorbable vapors below the threshold of smell are well below the lower flammability limit (by a factor of about 100 to 1), if you can't smell it, it should not be a fire hazard.

The Occupational Safety and Health Administration has set the limit for employee exposure to Xylene at 100 parts per million over an eight hour work day. When operated as directed, the Fume Adsorber will remove Xylene content to below these levels.

IV. Maintenance:

Carbon Filter Element Replacement:

The most practical and economical method of determining the service life of activated charcoal filters for most applications is by the sense of smell. The amount of odor breakthrough after it is detected usually continues at a low level for a period of time. The first breakthrough usually occurs on days of high humidity.

One should be able to predict life expectancy after 2 or 3 replacement periods. Due to the wide variety of potential vapors used, frequency of adsorber use, relative humidity and also varied olfactory sensitivity to particular odors, it is not possible to predict service life with a high degree of accuracy.

Usually, replacement of the activated charcoal filter is indicated after the first odor breakthrough. While the nose is not a quantitative apparatus, it is a first line gas detection unit. It is in the most opportune orientation between the Fume Adsorber and the operator to most selectively judge odor threshold.

For example, an application using Xylene, Toluene or Benzene for staining or coverslippling procedures, a 3-4 MONTH filter replacement cycle is recommended. For use with vapors having a higher loading rate, the filter element should be replaced more frequently.

To Replace the Filter - Proceed as Follows:

- a. Remove acrylic hood from louvered filter frame.
- b. Set superstructure on its back (filter frame/s up).
- c. Remove the four filter compression knobs. (4 per filter)

- d. Slip filter frame from plenum, exposing roughing prefilter.
- e. Remove prefilter and set aside.
- f. Remove carbon filter element and discard.

CAUTION: Filter will be loaded with adsorbate. Use suitable techniques for safe handling and disposal.

- g. New carbon filter element is ready to install. Lay in place between four filter frame studs.
- h. Clean roughing prefilter as required and place on top of carbon filter element.
- i. Slip louvered filter frame over filters and adsorber superstructure. Studs will protrude through holes in frame.
- j. Start four knobs on studs, tighten lightly.
- k. Set superstructure upright on flat surface, align filter frame with superstructure so the assembly sets flat on surface, snug down knobs hand tight, bottom two first, top two last.
- l. Reinstall acrylic hood.

Blower Motor Lubrication:

The Fume Adsorber utilizes a brushless motor and nonsparking blower wheel. Every six months the motors should be lubricated with 10 to 20 drops of SAE 10W or 20W non-detergent oil (ML type) or with electric motor oil.

Caution: Make sure adsorber is disconnected from electrical service.

- a. Remove acrylic hood.
- b. Place superstructure face down, so it is supported by the four filter frame knobs.
- c. Remove the five rear deck sheet metal screws. (ten if double wide)
- d. Remove rear deck, to which motor blower is attached.
- e. Lubricate per paragraph above.
- f. Reassemble.

It is often convenient to lubricate motor and replace carbon filter element in the same cycle.

Acrylic Hood Cleaning:

To clean sash, wash with non-abrasive soap, or detergent and water, using bare hand to feel and dislodge any dirt. A soft grit free cloth, sponge or chamois may be used. Dry with a clean, damp chamois. Occasional application of paste wax to edges of hood will inhibit solvent attack.

Should replacement parts for the Adsorber be required, refer to the serial number located near the power cord strain relief on any correspondence with the manufacturer.

Replacement Parts

69005	Exhaust Screen
69007	Carbon Filter Element
69011	Blower Exhaust Gasket
69016	Acrylic Hood (Single Unit)
69020	Exhaust Motor-Blower
96022	Roughing Prefilter
13324	Cord & Switch Set
69203	Acrylic Hood (2 Wide Unit)

V. Appendix

RELATIVE CAPACITY OF ACTIVATED CHARCOAL FOR VARIOUS CONTAMINANTS

SOURCE: BARNEBEY-CHENEY

Acetic Acid	4	Dichloronitroethane	4	Monochlorobenzene	4
Acetic Anhydride	4	Dichloropropane	4	Monofluorotrichlorome-	4
Acetone	3			thane	
Acrylic Acid	4	Diethyle Ketone	4	Naphtha	4
Acrylonitrile	4	Dimethylaniline	4	Naphthalene	4
Amyl Acetate	4	Dimethylsulfate	4	Nicotine	4
Amyl Alcohol	4			Nitro Benzenes	4
Amyl Ether	4	Dipropyl Ketone	4	Nitroethane	4
Anesthetics	3	Embalming Odors	4	Nitromethane	4
Aniline	4			Nitropropene	4
Antiseptics	4	Ethyl Acetate	4	Nitrotoluene	4
Benzene	4	Ethyl Acrylate	4	Nonane	4
Borane	3	Ethyl Alcohol	4	Octalene	4
Bromine	4	Ethyl Benzene	4		
Burned flesh, food,fat	4	Ethyl Bromide	4	Organic Chemicals	4
Butadiene	3	Ethyl Chloride	3	Ozone	4
Butanone	4			Palmitic Acid	4
Butyl Acetate	4	Ethyl Formate	3	Paradichlorobenzine	4
Butyl Alcohol	4	Film Processing Odors	3	Pentane	3
Butyl Cellosolve	4	Indole	4	Pentanone	4
Butyl Ether	4	Inorganic Chemicals	4	Perchloroethylene	4
Butyric Acid	4	Iodine	4	Phenol	4
Camphor	4	Iodoform	4	Phosgene	3
Cancer Odor	4	Isophorone	4	Plastics	4
Caprylic Acid	4	Isopropyl Acetate	4	Propane	2
Carbolic Acid	4	Isopropyl Alcohol	4	Propionic Acid	4
				Propyl Acetate	4
Carbon Tetrachloride	4	Kerosene	4	Propyl Alcohol	4
Cellosolve	4	Lactic Acid	4	Propyl Chloride	4
Cellosolve Acetate	4	Menthol	4		
Chlorobenzene	4	Mercaptans	4	Propyl Mercaptan	4
Chlorobutadiene	4	Mesityl Oxide	4	Putrescine	4
Chloroform	4			Pyridine	4
Chloronitropropane	4	Methyl Acetate	3	Resins	4
Chloropicrin	4	Methyl Acrylate	4	Skatole	4
Cigarette Smoke Odor	4	Methyl Alcohol	3		
Cleaning Compounds	4	Methyl Bromide	3	Stoddard Solvent	4
Combustion Odors	3	Methyl Butyl Ketone	4	Styrene Monomer	4
Creosote	4	Methyl Cellosolve	4		
Crotonaldehyde	4	Methyl Cellosolve Ace-	4		
		tate		Tetrachloroethylene	4
Cyclohexanol	4	Methyl Chloride	3	Tobacco Smoke Odor	4
Cyclohexanone	4	Methyl Chloroform	4	Toluene	4
Cyclohexene	4			Toluidine	4
		Methyl Ethyl Ketone	4	Trichlorethylene	4
Decaying Substances	4	Methyl Formate	3		
Deodorants	4	Methyl Isobutyl Ketone	4	Turpentine	4
Detergents	4	Methyl Mercaptan	4	Urea	4
Dibromoethane	4	Methylcyclohexane	4	Uric Acid	4
Dichlorobenzene	4	Methylcyclohexanol	4	Valeric Acid	4
Dichlorodifluoromethane	4	Methylcyclohexanone	4	Valeraldehyde	4
Dichloroethane	4	Methylene Chloride	4		
Dichloroethylene	4	Mildew	3	Volatile Materials	3
Dichloromonofluormethane	3			Xylene	4

KEY: 4 - High Capacity 3 - Satisfactory 2 - Not highly adsorbed 1 - Low capacity