



## Ductless Fume Hood Application

Traditional fume hoods are designed for a wide range of applications with few restrictions on their use. However, ductless fume hoods are not designed to fit all purposes and all materials. Therefore, to guide the user in the decision on whether ductless hoods are a safe and appropriate-choice for their activities, the following application has been developed.

1. Use the following chemical list as a guide to determine the type of fume hood required.
2. Mark each chemical with and X or  $\checkmark$  and include the approximate amount.
3. Add any chemicals that are not on the list.
4. Provide this information to the hood manufacturer to determine the appropriate hood and filtration.
5. Make and model of hood \_\_\_\_\_
6. Recommended filtration \_\_\_\_\_
7. Hood location \_\_\_\_\_

Chemical	Amount used	Chemical	Amount used	Chemical	Amount used	Chemical	Amount used
<b>ACIDS</b>		<b>ESTERS</b>		<b>HALOGENS</b>		<b>NITROGEN COMPS</b>	
Acetic		Butyl Acetate		Bromine		Acetonitrile	
Butyric		Cellosolve Acetate		Butyl chloride		Ammonia	
Carbolic		Ethyl Acetate		Carbon tetrachloride		Amies - low MW	
Formic		Ethyl Acrylate		Chlorine		Aniline	
Osmium tetroxide		Ethyl Format		Chlorobenzene		Diethyl amine	
Phenol		Isopropyl Acetate		Chloroform		Ethyle amine	
Propionic		Methyl Acetate		Dibromoethane		Hydrogen cyanide	
<b>ALCOHOLS</b>		<b>ALDEHYDES &amp; KETONES</b>		Dichlorobenzene		Indole	
Ethyl		Acetone		Dichloroethylether		Nitric acid rfumes	
Amy		Acetaldehyde		Ethyl bromide		Nitrobenzene	
Cbutyl		Acrolein		Ethyl chloride		Nitroethane	
Cyclohexanol		Benzaldehyde		Ethyle dichloride		Nitromethane	
Isopropyl		Cyclohexanol		Hydrogen bromide		Pyridine	
Methanol		Diethyl Ketone		Hydrogen chloride		Uric acid	
Propyl		Formaldehyde		Iodine		Nitrogen dioxide*	
<b>ALIPHATIC HYDROCARBONS</b>		Gluteraldehyde		Iodoform		<b>AROMATIC HYDROCARBONS</b>	
Acetylene		Methyl butyl ketone		Methyl bromide		Benzene	
Iso-butane		Methyl ethyl ketone		Methyl chlride		Napthalene	
Butylene		Methyl isobylketone		Tetrachloroethane		Ninhydrin	
Butadiene		Propioanldehyde		Vinyl chloride		Styrene monomer	
Cyclohexane		<b>ETHERS</b>		<b>SULFUR COMPOUDS</b>		Toluene	
N-decane		Amyul		Carbon disulfide		Toluidine	
Ethane		Butyl		Methyl sulfate		Xylene	
Ethylene*		Dioxan		Ethyl mercaptain		<b>MISCELLANEOUS</b>	
N-Heptane		Diethyl (ethyl)		Hydrogen sylfide		Carbon monoxide*	
Hexane		Ethlene oxide		Mercaptins-high MW		Carbon dioxide*	
Hexylene		Isopropyl		Sulfur dioxide		Resins	
Methane		Methyl*		Sulfur trioxide		Adhesives	
N-octane		Propyl		Sulfuric acid		Other:	
Pentane				Tetrahydrothiapene			
Propane*							

Requested:

\_\_\_\_\_ Date: \_\_\_\_\_

Department Chair/ PI

Approved:

\_\_\_\_\_ Date: \_\_\_\_\_

Environmental Health & Safety

\_\_\_\_\_ Date: \_\_\_\_\_

Dean, College of: \_\_\_\_\_

## Application Instructions

### Determine the Appropriate Hood and Filters Required

1. There are several ductless fume hood manufacturers. The university currently uses and has previously-approved Purair hoods made by Air Science; however, other manufactures may provide similar systems. The unit selected should comply with ANSI, OSHA, BSI and AFNOR standards.

Air Science <http://www.air-science.com/ductlessfumehoods.html>

Air Clean Systems <http://www.aircleansystems.com/>

Labconco <http://www.labconco.com>

2. Identify the chemicals that will be used in the hood and check the appropriate boxes on the front of this form.
3. Contact Environmental Health and Instructional Safety at ext. 7233 for assistance.
4. Contact the manufacturer with the chemical information and identify the appropriate filters.
5. The hoods must be equipped with
  - a. Pre-filtering system
  - b. Capacity for housing multiple filters
  - c. Electronic filter saturation alarm
  - d. Continuous airflow display
  - e. Chemical resistant spill tray
  - f. Counter for hours of use

### Approval

Obtain signatures from the Department Chair, College Dean and Director, EH&S.

### Questions?

Please call the Environmental Health and Instructional Safety Office at 657-278-7233.