

INTRODUCTION

Fume Hoods are ventilation devices designed to capture and remove chemical vapors, fumes, odor, particulates. This equipment is designed to provide protection from toxic chemical fumes and are essential in most laboratories as it is the primary method of exposure control.

Currently, two types of hoods exist: Ductless Fume Hood (equipped with filters) and Conventional Fume Hood (with ducting system).

Ductless Fume Hood uses carbon filters to remove chemical odors. It is mainly used for simple applications such as transfer of solutions, sample preparation, dilution and titration. It provides operator and environment protection against hazardous fumes. These hoods do not require any installation and make-up air system, are convenient to use, promote energy-savings and can easily be relocated.

Ducted Fume Hoods requires an installation and make-up air system to contain and remove chemical fumes and provide operator protection. This unit is designed with robust features and constructed from more chemical resistant materials to withstand a wider range of chemical analysis.

As an **Excellent Service Company**, Esco offers service programs to meet your individual needs and to keep your equipment in excellent working condition and highest efficiency.

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Esco Fume Hood Services

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Esco Fume Hood Services

PREVENTIVE MAINTENANCE SERVICES

SCHEDULED MAINTENANCE

DUCTLESS FUME HOOD

No.	Description of Task to Perform	Maintenance to be carried out every				
		Week	Month	Quarter	1 Year	2 Years
1	Check the alarm and measure basic airflow	✓				
2	Clean interior work surface and walls with soap water	✓				
3	Clean Sash with appropriate glass cleaner	✓				
4	Clean the exterior surfaces of the ductless fume hood		✓			
5	Measure the face velocity		✓			
6	Check Fans, drives, and lamps for proper operation			✓		
7	Clean stainless-steel surface using MEK (for stubborn Stains)			✓		
8	Re-certification				✓	
9	Change fluorescent lamps					✓
10	Change of carbon Filters	Check according to Filtrachek™ recommendation (approximately, annually)				

DUCTED FUME HOOD

No.	Description of Task to Perform	Maintenance to be carried out every				
		Week	Month	Quarter	1 Year	2 Years
1	Check the alarm and measure basic airflow	✓				
2	Clean interior work surface and walls with soap water	✓				
3	Clean Sash with appropriate glass cleaner	✓				
4	Clean the exterior surfaces		✓			
5	Measure the face velocity		✓			
6	Check Fans, drives, and lamps for proper operation			✓		
7	Re-certification				✓	
8	Change fluorescent lamps					✓

FUME HOOD SERVICE CHECKLIST:

Esco is the world-leader when it comes to offering fume hood equipment that has international compliance to both the American ASHRAE 110-2016 and European Standard EN141751.

ASHRAE110-2016 (ANSI approved) is one of the most challenging standards in the world that tests the containment efficiency of a fume hood. The efficiency is derived from the fume hood's ability to contain the released challenge gas under normal operation. This standard employs a set of rigorous tests to evaluate hood performance such as: the flow visualization, the face velocity test, and the SF6 containment test.

1. Face Velocity Measurement Test

Face velocity measurements determine the average velocity of air moving perpendicular to the hood face. The measurement is expressed in m/s or fpm. Face velocities will often provide information concerning the fume hood's ability to properly control contaminants.



2. Airflow Visualization

Local and gross airflow visualization tests conducted to observe airflow patterns inside work chamber. This test qualitatively tests a hood's ability to contain vapors.



3. Tracer Gas SF₆ containment Test (Optional with separate costs)

Using Sulfur Hexafluoride, this test checks how efficient and effective the fume hood is for containing hazardous fumes.



4. Carbon Filter Test (Applicable for Ductless Fume Hoods, optional with separate costs)

This test checks if the carbon filter may be still be used or if it is saturated, and needed to be replaced.



5. Noise Level Test (Applicable for Ductless Fume Hoods, optional with separate costs)

This test checks the fume hood's noise level if within the acceptable range.



6. Light Intensity Test (Optional with separate costs)

This test checks the fume hood's Light Intensity is within the acceptable range.



7. Cleaning of Cabinet's Exterior and Interior

TROUBLESHOOTING AND PARTS REPLACEMENT

Esco provides replacements for consumable elements as well as any components that might fail while the product is in service or under warranty.

IQ/OQ VALIDATION

Esco provides our customers instructions for Installation / Operation Qualification (IQ/OQ) protocol of our products.

Esco also can perform these services directly on behalf of its Customers or arrange them through independent approved local certifiers. The availability may vary from country to country and region to region.

TRAINING AND WORKSHOPS

Esco offers Chemical Safety Awareness Seminars and Training on how to work safely with Fume hoods.

SERVICES TO OTHER BRANDS

Esco does not only provide services to its own product line but also for other brands. Esco assures that your laboratory Fume Hoods are maintained and certified according to the ASHRAE 110 or EN 14175 Standards.

