BUREAU OF MATERIALS
MATERIALS PROCEDURES

MP NUMBER: 25-25
EFFECTIVE DATE: 03/03/25

APPROVAL: *Edward Inman*

FUME HOOD INSPECTION

PURPOSE:

To establish procedures for inspecting fume hoods by sight and by measuring the air velocity at the face of the hood.

SUPERSEDES:

None

SCOPE

This procedure will cover the correct procedure on how and when to inspect fume hoods. This is very important because if not done correctly then there is a possibility for fumes to leak out and the exposure will not be controlled.

DEFINITIONS

ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers

REFERENCES:

ASHRAE 110 - Method of Testing Performance of Laboratory Fume Hoods

II. PROCEDURE:

Daily

- Check and record the hood static pressure and ensure it is within the proper operating range.
- Check for damaged baffles.
- Open access doors

- Make sure air bleeds are properly operating.
- Check for visible leakage of product or contaminant.

Weekly

- Check all slots for debris and buildup.
- Check that the baffles and the flanges are clean and unobstructed.

Monthly

- Check all hoods and enclosures for signs of physical damage, leaks, rust, corrosion or erosion.
- Check all hood components for clogs or obstructions.
- Measure Face Velocity.

How To Measure Face Velocity

1. Fully open the sash.
2. Measure the cross-sectional velocity by using the velometer and holding it perpendicular, 6 inches in front of the midpoint of the hood. It should not be greater than 20 feet per minute (FPM).
3. Mount the velometer onto a ring stand (calibrate it if needed).
4. Divide the face into 6 equal sectors.
5. Now take a reading from the center of each sector (NOTE- The inlet of the velometer must be 1 inch behind the sash)
6. Record, and average them.
7. No face velocity measurement on the grid should be less than 60 FPM.
8. If the average is above 80 FPM then it passes and no further testing is required.
9. If the hood fails when the sash is fully open, lower the sash until it hits the sash lock.
10. Repeat steps 2 - 6.
11. If it still fails then retest after 72 hours.

If The Hood Fails

- Everyone that works in the lab must be informed to not to use that hood.
- A sign should be attached onto the hood with the following information:
  - Building number
  - Room number
  - Hood number
  - Flow rate (the average calculated above)
  - Write “The fume hood shall not be used until repaired”
  - Your name and date
- Contact the Chemical Hygiene Officer (CHO) and the Department Building Coordinator (DHO).

If The Hood Passes

- Record the date and the face velocity onto a piece of yellow paper and initial it.
- Post this paper onto the hood.

WARNING

THIS HOOD IS UNSAFE

This fume hood **does not meet** the minimum flow rate of **80 Feet/minute** at a minimum sash opening height of 18 inches. Further use of this hood is **prohibited** until the cause of the problem is found and appropriate repairs are completed. Inquiries concerning this problem should be addressed to the Chemical Hygiene Officer (CHO) or the Department Building Coordinator (DHO).

Room:_____ Fume Hood #:_____

Tested By:_____ Testing Date:_____/_____/_____

MONTHLY FUME HOOD FACE VELOCITIES FOR CHEMISTRY LAB									Date:
LOCATION / PURPOSES		**FUME HOOD NO.**	**READING**						**AVERAGE**
			1A	2A	3A	1B	2B	3B	
A. Special Projects (Lab No. 2-01)									
a. General	Full Face	1--15							
	18 in Sash								
B. Atomic Absorption (Lab No. 2-02)									
a. General	Full Face	2-A							
	18 in Sash								
C. General Testing (Lab No. 2-24)									
a. Bunsen Burner	Full Face	24-6							
	18 in Sash								
b. Heating (John)	Full Face	24-8							
	18 in Sash								
c. Filtration (John)	Full Face	24-9							
	18 in Sash								
d. Filtration (Al, Kim)	Full Face	24-10							
	18 in Sash								
e. Steel Sanding	Full Face	24-11							
	18 in Sash								
f. Epoxy	Full Face	24-12							
	18 in Sash								
g. Incubator / Filtration	Full Face	24-13							
	18 in Sash								
D. Paint (Lab No. 2-25)									
a. General	Full Face	25-1							
	18 in Sash								

1A	2A	3A
1B	2B	3B

Comments:

Less than 60

Average less than 80