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TEST RESULTS
ANSI/ASHRAE 110-1995
Method of Testing Performance of Laboratory Fume Hoods

Fume Hood Model HP-608
1/17/2012

This report contains the test results, for the specified fume hood, when tested in accordance with the ANSI ASHRAE 110-1995 "Method of Testing Performance of Laboratory Fume Hoods" test guideline. This method of testing applies to conventional, bypass, add air and VAV fume hoods.

The sub-headings listed below correspond to the sub-headings in the ANSI/ASHRAE 110-1995 guideline.

4. INSTRUMENTATION AND EQUIPMENT

Tracer Gas:	98% Sulfur Hexafluoride
Ejector System:	Custom Fabricated Ejector per figures 1-3.
Critical Orifice:	Provides a flow rate of 4.0 Lpm at an upstream pressure of 36 psi. Calibration Date 1-17-12 Calibration Time 9:10 AM
Detector Instrument:	Qualitek Q200, S/N 2001950 Range of detection 0 to 18.09 PPM. Calibration Date 1-17-12 Calibration Time 9:15 AM. Recalibration Date 1-17-12 Recalibration Time 11:00 AM. Calibration Variance 0%
Recorder:	Readings are recorder with a computer with accuracy of ±0.092% of full scale.
Manikin:	Of size and placement as specified in the ASHRAE guideline.
FV Measuring Instrument:	(3) Alnor AVT55 Anemometes, S/N 03117064, 03117065, 03117066. Range of detection 25 to 200 FPM Calibration Date 03-01-11.
Smoke:	Local and large-volume generating devices in accordance with the ASHRAE guideline.

5. TEST CONDITIONS

Room Ventilation:	At full normal operation.
Room Description:	The test was conducted at the BMC Test Laboratory. Crosscurrents in the area 5' in front of the hood are far below 30 fpm. Room pressurization is measured and maintained at 0.02 in. w.g. below the static pressure outside the test room.
Background Levels:	The background level is below 10% of control level.
Preliminary Data:	The test laboratory is 18' X 16' X 10' high with a 92" X 36" supply air fixture centered in the 18' wall. The fume hood is centered along the 18' wall opposite the supply air fixture. The room has two doors, one 3' door to the left of the supply air fixture and one 16' overhead door centered behind the hood. The doors remain closed during the test.

HOOD DESCRIPTION

Model No:	HP-608
Baffle Type & Position:	High performance fixed baffle system
Sash Opening:	18" vertical (operating height)
Specified Face Velocity:	80 FPM
Volume:	860 CFM
Static Pressure:	.15"

6. FLOW VISUALIZATION AND VELOCITY PROCEDURE

LOCAL VISUALIZATION CHALLENGE

Smoke was applied to the following locations with the listed results.

Under the airfoil:	Smoke was exhausted smoothly and was not entrained in the vortex at the top of the hood.
Along both walls:	Positive air movement, no reverse flows.
Along the floor:	Positive air movement, no reverse flows.
8" diameter on back:	Positive air movement, no reverse flows, no dead air space, no visible smoke flow out of the front of the hood.
Along equipment:	There was no equipment present in the hood. Smoke generated at the work top flowed evenly into the lower bafle opening almost immediately.

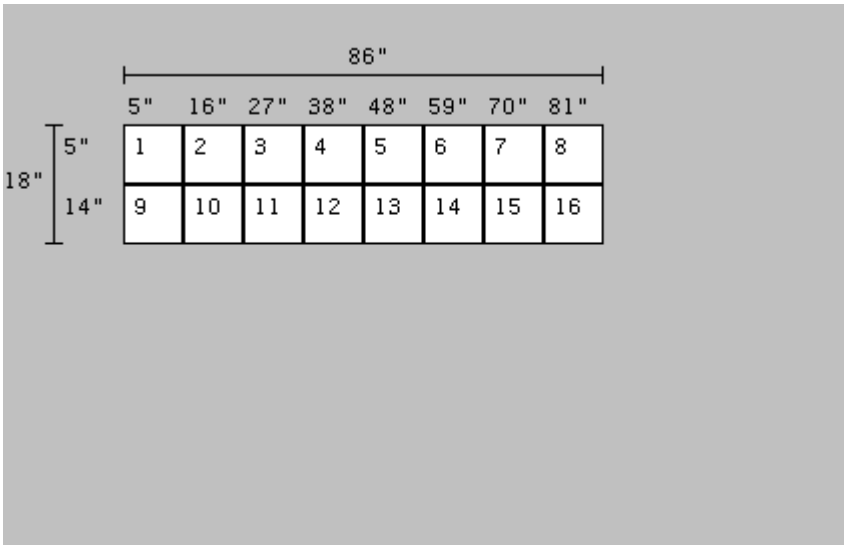
LARGE VOLUME VISUALIZATION CHALLENGE

Large volume release:	All smoke was rapidly and smoothly exhausted. There was no visible release of smoke from the hood. There was no equipment present in the hood.

Fume Hood Model HP-608

FACE VELOCITY MEASUREMENTS

A grid pattern is formed by equally dividing the hood opening into vertical and horizontal dimensions, not exceeding 12". Face velocity readings were taken at the center of the grid spaces indicated by number. (The dimensions shown below indicate the center of the grid spaces from the edge of the opening.) Four readings were taken at each point at approximately five second intervals.



Position Number	Reading #1	Reading #2	Reading #3	Reading #4	Average
1	80	82	81	78	80
2	77	74	77	78	77
3	75	76	75	79	76
4	77	79	80	80	79
5	85	78	83	88	84
6	83	84	84	78	82
7	82	81	86	83	83
8	79	81	80	81	80
9	79	81	80	77	79
10	77	83	84	80	81
11	86	81	87	83	84
12	83	78	84	88	83
13	82	77	81	80	80
14	80	77	77	79	78
15	84	83	80	83	83
16	84	77	82	81	81

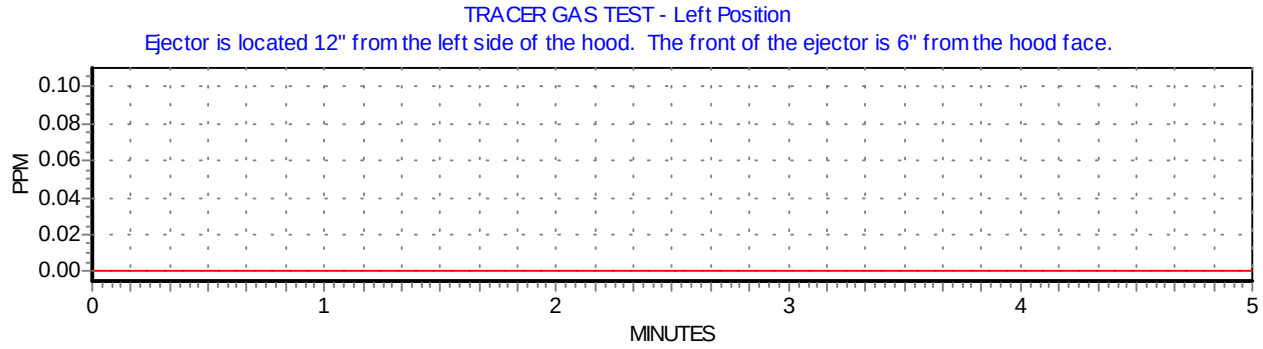
Average Face Velocity:	81
Highest Reading:	88
Lowest Reading:	74

TESTED BY:

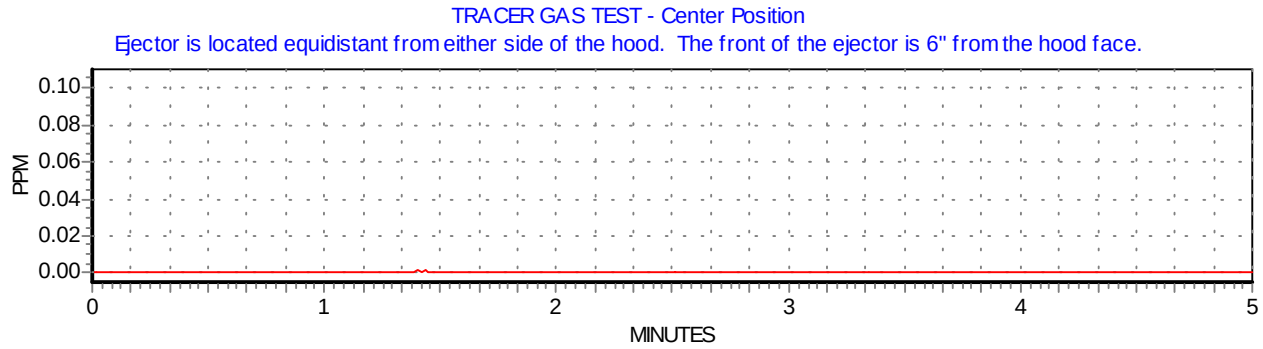
Brian White 1/17/2012

7.1 TRACER GAS TEST - REPORT #1

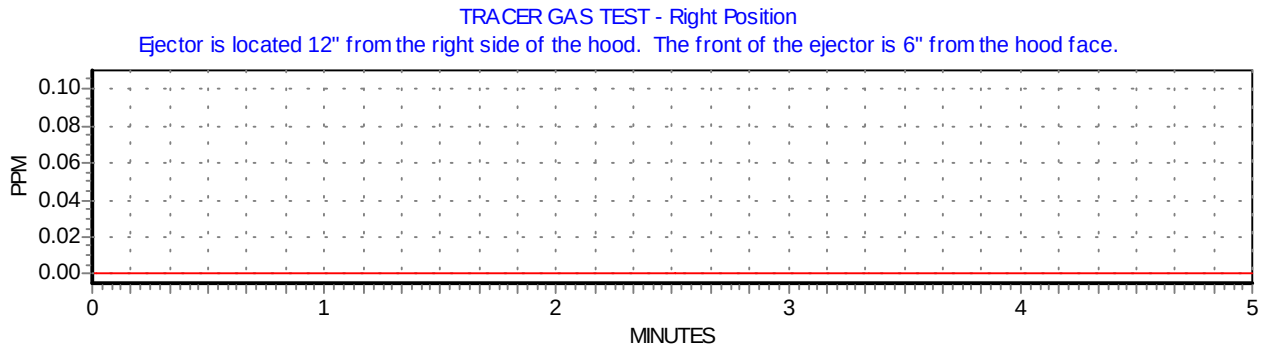
Report #1: With the sash set at the specifed opening, three five minute tests are performed with the ejector and manikin located in the left, center, and right positions. Ratings for each position and overall hood rating are as shown.



4.0 AM



4.0 AM 0.000



4.0 AM

HOOD RATING
4.0 AM 0.000

TESTED BY:

Brian White 1/17/2012