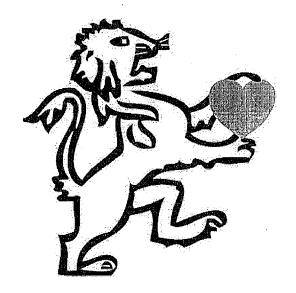
BALANCING REPORT

PROJECT: Woods Hole Oceanographic Inst. Woods Hole , Mass Atlantis, Portable Lab Van,

DATE: 3/6/2013



TECHNICIAN: JACK WALSH TABB CERTIFICATION: BB8094737

LEONHARDT

WELLESLEY, MASSACHUSETTS

(781) 237-7200

Fume Hood Testing and Certification Report

acility:	· · · · · · · · · · · · · · · · · · ·				Test Date: 2/15/13						
uilding:	ATLANTIS		Re-Certification Due Date: 2/15/14 Hood Manufacturer: LABCONCO								
oom #:	HYDRO LAB								•		
lood #:	H-1			Velocity	Sensor Manufa	cturer:	None			-	
				•	Sach	. Type:	☑ Vertical	["]	Horizontal	☐ Com	
Sash Height: Sash Height authorized by: Rick Sash Operation: Hood Lighting: Certification Criteria: Ac Service Remarks: NO Test Instrument: Short Model No.: ADM Serial No.: M984 Accessories: Note: The visit of t				Guoi	, , ypo.	VOI HOUL	L3 '	TOTIZOTICI	L 001111		
		······	Re-Certification Due Date: 2/15/14 Hood Manufacturer: LABCC Velocity Sensor Manufacturer: None Sash Type: Testing Services Performed Fall N/A ANSI/A Sash Width 41-1/2" SEFA acilities Jonal Non-operational Face Velocity Sensor Callt and face velocities on standard hood 90-110 FPM a face velocities on "Air Sentry" hood 70 FPM (+/- 10% at may be modified within reason to achieve face velocity height is 20". ELOCITY MONITOR Instrumentation Data Multimeter Calibration Date: 10/31/								
	;		Testi	na Servic	es Performed						
	Velocity Profile:	☑ Pass □				П	ANSI/AIHA Z9.5-9	92			
								_			
				operational	Face Veloc	city Sense	or Calibrated:	□Yes	☑ No		
	1	•				,					
	i i i i i i i i i i i i i i i i i i i								i		
	Certification Criteria:	- Acceptable face	velocitie	es on stan	dard hood 90-11	0 FPM					
							·/- 10%).				
					,						
	Service Remarks	rangor odom mong	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	·· '							
	<u> </u>	NO FACE VELOC	CITY MC	NITOR					·		
		1101110212200	×1111		-,				•		
	Service Nemarks:								•		
								· · · · · · · · · · · · · · · · · · ·	•		
									•		
	<u> </u>									l	
			. 15	ace Veloc	ity Profile						
Room #: H			<u>-</u>				•				
					, · · · · · · · · · · · · · · · ·		Velor	ity Totals	346		
Building: AT Room #: HY Hood #: H-		1:	2./	11/	08			•			
		15)4	1 14	30			_			
					Certification Due Date: Hood Manufacturer: Sensor Manufacturer: Sensor Manufacturer: None Sash Type: Vertical Horizo Performed ANSI/AlHA Z9.5-92 SEFA 1.2-1996 Face Velocity Sensor Calibrated: Performed Face Velocity Sensor Calibrated: Face Velocity Sensor Calibrated: Face Velocity Sensor Calibrated: Face Velocity Sensor Calibrated: Yes Face Velocity FPM Sentry" hood 70 FPM Sentry" hood 70 FPM (+/- 10%). The reason to achieve face velocities. Selection Type: Velocity Totals: Average Face Velocity: Average Face Velocity: Thation Calibration Date: 10/31/12 Calibration Due Date: 10/31/13 Airfoll Airfoll Over a one square foot area.						
Building: ATL Room #: HYI Hood #: H-1										l	
									4		
				Instrume	ntation						
	Test Instrument:	Shortridge AirData M	ultimeter		Calibratio	on Date:	10/31/12		····	· ·	
			<u> </u>								
	1								ļ		
			/elarid		Γ.	✓ Airfoll					
										1	
	Note:	•		-	•						
Building: A Room #: Hood #: H		i nerefore only three	readings	are required	to ootain an accur	ate avera	ge race velocity.			ı	

LEONHARDT COMPANY, INC.

892 Worcester Street, Suite 220 Wellesley, Massachusetts 02482 Tel: (781) 237-7200 ~ Fax: (781) 237-3399

Fume Hood Testing and Certification Report

Facility:	Woods Hole Oceanograp	hic inst.			Test Date:	2/15/13			•
Building:	ATLANTIS			Re-0	Certification Due Date:	2/15/14		,	
Room #:	WET LAB		•		Hood Manufacturer:	HAMILTON			
Hood #:	H-2			Velocity	Sensor Manufacturer:	None			
				•	Sash Type:		[⁻]	Horizontal	Combo
					• ,		1		batter
			Testing	g Service	es Performed				
	Velocity Profile:	☑ Pass □		□ N/A		ANSI/AIHA Z9.5-	92		
	Sash Height:	14-1/2" Sash V	Vidth 3:	2-1/2"	7	SEFA 1.2-1996			
	Sash Height authorized by:	Rick Galat - Facilities					_	_	
	Sash Operation:	Operational	☐ Non-op		Face Velocity Sens	or Calibrated:	□Yes	☑ No	
	Hood Lighting:	Operational	☐ Non-op	erational					
					lard hood 90-110 FPM				
					Sentry" hood 70 FPM (+				
					reason to achieve fac	e velocities.			
		- Target sash hei	gni is zu".						
	Service Remarks:	NO FACE VELO	NTV MON	IITOD				-	
		NOTACE VELO	יוטועו דווכ	NITOR				-	
	<u> </u>							- 1	
								-	
•				,	1			-	
			Fac	ce Veloci	ity Profile		1		
	l					Velo	city Totals:	299	
		. 9	8	100	101		Readings:		
						Average Fac	-		
	·						•		
		•			•				
			1. 1.	nstrume	ntation				
	Test Instrument:	Shortridge AirData M	lultimeter		Calibration Date:	10/31/12			
	Model No.:				Calibration Due Date:	10/31/13			
	Serial No.:	M98404							
	Accessories:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Velgrid		☑ Airfoil				
		•		•	over a one square foot area				
		Therefore only three	readings ar	e required	to obtain an accurate avera	age face velocity.			

Fume Hood Testing and Certification Report

Facility:	Woods Hole Oceanogra	phic Inst.		Test Date: 2	/15/13			,
			Re-Cerl	tification Due Date: 2	/15/14			
Room #:	MAINE LAB		ŀ	lood Manufacturer; L	ABCONCO			
Hood #:	H-3	Velocity Se	nsor Manufacturer: N	lone				
				Sash Type:	☑ Vertical		-lorizontal	☐ Combo
Sash Sash Height author Sash Op Hood L Certification Crit Service Remai						L1		
			ng Services F	Performed				
	Velocity Profile:		□ N/A		NSI/AIHA Z9.5-9	2		
	Sash Height:	13Sash Width	41	☑ s	EFA 1.2-1996			
	Sash Height authorized by:					_	_	
	Sash Operation:		operational	Face Velocity Sensor	r Calibrated:	□Yes	☑ No	
	Hood Lighting:	Operational Non-	operational					
								
	Certification Criteria:	- Acceptable face velocitie						
		- Acceptable face velocitie						
		- Sash height may be mod		ason to achieve face	velocities.	*		
		- Target sash height is 20	r" .					
	Service Remarks:	NO FACE VELOCITY MA	NITOD					
		NO FACE VELOCITY MO	MITOR					
		-						
					<u> </u>			
					· · · · · · · · · · · · · · · · · · ·			i
			ace Velocity I	Profile			:	ı
	,	•	acc voiceity					l
			*	· · · · · · · · · · · · · · · · · · ·	Veloc	ity Totals:	284	ĺ
	· · · · · · · · · · · · · · · · · · ·	97	95	92		Readings:	3	ĺ
			00	1	Average Face		95	ĺ
	*				, wordgo i doc	· voiceity.		l
				· · · · · · · · · · · · · · · · · · ·				i
			Instrumenta	tion				l
	Test Instrument	Shortridge AirData Multimeter		Calibration Date: 1	0/31/12			Ì
	Model No.:			Calibration Due Date: 1				
	Serial No.:			Outpitation Due Date.	0,01710			
	Accessories:			[7] Airfoil				1
		The velgrid accessory samples	s air velocity over					l
	11010.	Therefore only three readings			e face velocity.			l
	L						 	•

Fume Hood Testing and Certification Report

Facility:	Woods Hole Oceanogra	phic Inst.		Test Date: 2	2/15/13				
Building:	ATLANTIS		— Re-	Re-Certification Due Date: 2/15/14					
Room #:	BIO-CLEAN LAB			Hood Manufacturer: HAMILTON					
Hood #:	H-4		 Velocity	Velocity Sensor Manufacturer: None					
				Sash Type:	্য Vertical		Horizontal	☐ Combo	
		· · · · · · · · · · · · · · · · · · ·							
			Testing Service	es Performed			1.2		
	Velocity Profile:	☑ Pass ☐ I	Fail □ N/A		ANSI/AIHA Z9.5-	92			
	Sash Height:	22 Sash Wid	ith 39		SEFA 1.2-1996				
	Sash Height authorized by:	Rick Galat - Facilities							
	Sash Operation:	☑ Operational	Non-operational	Face Velocity Senso	or Calibrated:	□Yes	s ☑ No		
	Hood Lighting:	☑ Operational [Non-operational						
				·····					
	Certification Criteria:			dard hood 90-110 FPM					
				Sentry" hood 70 FPM (+.					
				n reason to achieve face	e velocities.				
		 Target sash heigh 	t is 20".						
	Service Remarks:	NO FACE VELOCIT	TV MONITOD				- [
1		NO FACE VELOCIT	I Y WONITOR				-		
							-		
		•					-		
			· · · · · · · · · · · · · · · · · · ·						
									
	The second second		Face Veloc	ity Profile					
						city Totals			
		118	110	97		Readings			
					Average Fac	e Velocity	: 108		
			Instrume	entation					
	Test Instrument:	Shortridge AirData Mult		Calibration Date:	10/31/12				
	Model No.:			Calibration Due Date:					
	Serial No.:							-	
	Accessories:		grid	☑ Airfoil					
	Note:	The velgrid accessory s	amples air velocity	over a one square foot area.					
		Therefore only three re	adings are required	to obtain an accurate average	ge face velocity.			-	

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892 Worcester Street, Suite 220 Wellesley, Massachusetts 02482 Tel: (781) 237-7200 ~ Fax: (781) 237-3399

Fume Hood Testing and Certification Report

Facility:	Woods Hole Oceanogra	phic Inst.			Test Date: :	2/15/13					
Building:	PORTABLE LAB VAN		Re-Certification Due Date: 2/15/14								
Room #:	RV KNORR		Hood Manufacturer: HAMILTON								
Hood #:	FLOW SCIENCES		Ve	elocity Sensor	Manufacturer: โ	None					
	VENTRO WORK STAT	ION			Sash Type:	☐ Vertical	П	Horizontal	☐ Combo		
						_	ld		_		
			Testing S	ervices Perfo	rmed						
	Velocity Profile:	☑ Pass	☐ Fail ☐	N/A		ANSI/AIHA Z9.5	-92				
	Sash Height:	8" / 19" Sash	n Width <u>22-1.</u>	<u>/4"</u>	☑ :	SEFA 1.2-1996					
	Sash Height authorized by:	Rick Galat - Faciliti	es								
	Sash Operation:	Operationa	ıl □Non-opera	tional Fa	ice Velocity Senso	or Calibrated:	□Yes	☑ No			
	Hood Lighting:	Operationa	I 🗹 Non-opera	tional							
								· · · · · · · · · · · · · · · · · · ·			
	Certification Criteria:	- Acceptable fac									
		- Acceptable fac									
		- Sash height m	•	l within reason	to achieve face	e velocities.					
	Condo Donado	- Target sash he	eignt is 20".			*					
	Service Remarks:	THIS IS A CUST	ON HOOD WITH	J LINGED DOG	D THAT ODEN		TEDIAL	- !			
		CAN BE ADDED					II CRIAL	- 1			
		DOOR CLOSED									
		HIGH SPEED.	(8) BOTT SET	OF READINGS	WENE TAKEN	WILLEANAL		-			
		THOM OF EED.						-			
			Face	Velocity Profi	е			1.4			
		@ 1		. @8"	_	DOO	R HEIGHT	19"	8"		
				T			city Totals:		125		
		230 215	200	125			Readings		1		
				1		Average Fac	_		125		
				1		7a.a.g.aa.					
	L					•					
			Inst	trumentation							
	Test Instrument	Shortridge AirData			Calibration Date:	10/31/12			l		
	Model No.:				ration Due Date:				l		
	Serial No.:								ſ		
	Accessories:] Velgrid		✓ Airfoil						
		The velgrid access	 	elocity over a one	square foot area	•					
	Therefore polythere rending are required to obtain an accurate average face velocity										

Fume Hood Testing and Certification Report

Facility:	Woods Hole Oceanogra	phic inst.		Test Date: :	2/15/13			•		
Building:	ATLANTIS		Re-Certification Due Date: 2/15/14							
Room #:	ISOTOP		Hood Manufacturer: FLOW SCIENCE							
Hood #:	H-5 FLOW SCIENCE	Velocity Sensor Manufacturer: None								
	VENTRO WORK STAT	TON		Sash Type:	☐ Vertical	m F	lorizontal	☐ Combo)	
				• •		Land				
			Testing Services Pe	erformed						
	Velocity Profile:	☑ Pass ☐ F	Anna		ANSI/AIHA Z9.5-	92				
	Sash Height:	8" / 19" Sash Wid	th <u>22-1/4"</u>	☑ :	SEFA 1.2-1996					
	Sash Height authorized by:					,,,,,, ,	,,,,,,			
	Sash Operation:	, ,	Non-operational	Face Velocity Senso	or Calibrated:	□Yes	☑ No			
	Hood Lighting:	Operational	Non-operational				i			
				100 110 mm11						
	Certification Criteria:		elocities on standard		(400/)					
			elocities on "Air Sentr							
			e modified within rea	son to acnieve face	e velocities.					
	Carrier Damarka	- Target sash height	. 15 20 .							
	Service Remarks:	THIS IS A CLISTOM HO	OOD WITH HINGED DOO	D THAT OBENS SO	THAT MATERIAL					
			INGS TAKEN WITH DO			·				
			OTH SET OF READINGS							
			CHARGE DUCT HAS BE			OF VAN	ļ			
			AIR VELOCITY READING				I			
			Face Velocity P	rofile	-					
•		@ 19"	@ 8"		DOOL	R HEIGHT	19"	8"		
					Velo	city Totals:	401	85		
		132 140 129	8	5	No. of	Readings:	3 .	1		
	,	,			Average Fac	e Velocity:	134	85		
		<u> </u>				-				
	<u> </u>									
			Instrumentati	on			j. 1966 - 60°			
	Test Instrument	Shortridge AirData Mult	meter	Calibration Date:	10/31/12					
	Model No.:			Calibration Due Date:	10/31/13					
	Serial No.:			·						
	Accessories:		·	☑ Airfoil						
	Note	•	amples air velocity over a	•						
	Therefore only three readings are required to obtain an accurate average face velocity.									