



August 31, 2017

Laboratory ID: 100045

Ethel Patricio
Liberty Mutual Insurance Industrial Hygiene Laboratory
Industrial Hygiene Laboratory, 71 Frankland Road
Hopkinton, MA 01748

Dear Ms. Patricio:

Congratulations! The AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC's Analytical Accreditation Board (AAB) has approved Liberty Mutual Insurance Industrial Hygiene Laboratory as an accredited Industrial Hygiene laboratory.

Accreditation documentation includes the IHLAP accreditation certificate, scope of accreditation document and a copy of the current AIHA-LAP, LLC license agreement (if your completed agreement is not on file at AIHA-LAP, LLC). The accreditation symbol has been designed for use by all AIHA-LAP, LLC accredited laboratories. If your laboratory chooses to use the symbol in its advertising the laboratory's accreditation, you must complete and return the AIHA-LAP, LLC license agreement to a Laboratory Accreditation Specialist. Once submitted, an electronic copy of the accreditation symbol will be sent to you. Please inform us if your laboratory does not wish to use the symbol in advertising.

Laboratory accreditation shall be maintained by continued compliance with IHLAP requirements (*see Policy Modules 2B and 6*), which includes proficient participation in AIHA-LAP, LLC approved proficiency testing, demonstration of competency, or round robin program as indicated on the AIHA-LAP "Approved PT and Round Robin" webpage, its associated Scope/PT table, and as required in Policy Module 6, for all Fields of Testing (FoTs) for which the laboratory is accredited. An accredited laboratory that wishes to expand into a new FoT must submit an updated accreditation application to AIHA-LAP, LLC for review by the AAB.

Any changes in ownership, laboratory location, personnel, FoTs/Methods, or significant procedural changes shall be reported to AIHA-LAP, LLC in writing within twenty (20) business days of the change.

The accreditation certificate is the property of AIHA-LAP, LLC and must be returned to us should your laboratory withdraw or be removed from the IHLAP.

Again, congratulations. If you have any questions, please contact Drake McGregor, Laboratory Accreditation Specialist, at (703) 846-0739.

Sincerely,

Cheryl O. Morton
Managing Director
AIHA Laboratory Accreditation Programs, LLC



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Liberty Mutual Insurance Industrial Hygiene Laboratory

Industrial Hygiene Laboratory, 71 Frankland Road, Hopkinton, MA 01748

Laboratory ID: 100045

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|---|---|
| <input checked="" type="checkbox"/> INDUSTRIAL HYGIENE | Accreditation Expires: October 01, 2019 |
| <input type="checkbox"/> ENVIRONMENTAL LEAD | Accreditation Expires: |
| <input type="checkbox"/> ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| <input type="checkbox"/> UNIQUE SCOPES | Accreditation Expires: |

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

William Walsh, CIH
Chairperson, Analytical Accreditation Board

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 15: 03/30/2016

Date Issued: 08/31/2017



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Liberty Mutual Insurance Industrial Hygiene Laboratory
Industrial Hygiene Laboratory, 71 Frankland Road, Hopkinton, MA 01748

Laboratory ID: **100045**
Issue Date: 04/02/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 06/01/1974

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/ Title of In-house Method	Method Description or Analyte <i>(for internal methods only)</i>
Chromatography Core	Gas Chromatography	GC/FID	ASTM D5578-04	
			LM-GC-59	Dimethyl Sulfide, Dimethyl DiSulfide
			LM-GC-68	Organic Vapors
			NIOSH 1000 (Modified)	
			NIOSH 1002	
			NIOSH 1003	
			NIOSH 1005	
			NIOSH 1007 (Modified)	
			NIOSH 1010	
			NIOSH 1020	
			NIOSH 1022	
			NIOSH 1024 (Modified)	
			NIOSH 1300	
			NIOSH 1301 (Modified)	
			NIOSH 1302 (Modified)	
			NIOSH 1400 (Modified)	
			NIOSH 1401 (Modified)	
			NIOSH 1402 (Modified)	
			NIOSH 1403 (Modified)	
			NIOSH 1450	
NIOSH 1451				
NIOSH 1453 (Modified)				
NIOSH 1454				



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Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1457	
			NIOSH 1458	
			NIOSH 1459	
			NIOSH 1500	
			NIOSH 1501	
			NIOSH 1550	
			NIOSH 1602	
			NIOSH 1604 (Modified)	
			NIOSH 1606 (Modified)	
			NIOSH 1609	
			NIOSH 1610	
			NIOSH 1613	
			NIOSH 1615	
			NIOSH 1616	
			NIOSH 2000	
			NIOSH 2004	
			NIOSH 2010	
			NIOSH 2500	
			NIOSH 2505 (Modified)	
			NIOSH 2508	
			NIOSH 2526	
			NIOSH 2527 (Modified)	
			NIOSH 2537	
			NIOSH 5020	
			NIOSH 5034	
			NIOSH 5523	
			NIOSH S-150	
			OSHA 1013	
			OSHA 1016	
			OSHA 103	
			OSHA 104	
			OSHA 21 (Modified)	
			OSHA 91	
OSHA PV2003 (Modified)				
OSHA PV2022				
OSHA PV 2041				
OSHA PV2053				
OSHA PV2061 (Modified)				
OSHA PV2095 (Modified)				
GC/MS		3M Method	LM-GCMS-8 - GC/MS scan	
		3M Method 3500/3520 (Modified)		



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Chromatography Core	GC/MS		CIBA GEIGY-C321A (Modified)	
			LM-GCMS-13	GC/MS Scan
			LM-GCMS-14	Organic Vapors by GC/MS
			LM-GCMS-5	Dimethyl Sulfide, Dimethyl Disulfide
			NIOSH 1007 (Modified)	
			NIOSH 1600 (Modified)	
			NIOSH 2002 (Modified)	
			NIOSH 5503 (Modified)	
			NIOSH 5515 (Modified)	
			OSHA 1013 (Modified)	
			OSHA 1016 (Modified)	
	Gas Chromatography (Diffusive Samplers)		3M Method 3500/3520	LM-GC-2
			3M Method 3500/3520 (Modified)	LM-GCMS-2
			3M Method 3551 (Modified)	
	Ion Chromatography (IC)		NIOSH 2007 (Modified)	
			NIOSH 2008	
			NIOSH 2011	
			NIOSH 2011 (Modified)	LM-IC-14; LM-IC-19
			NIOSH 6004 (Modified)	
			NIOSH 6005 (Modified)	
			NIOSH 6011 (Modified)	
			NIOSH 6013 (Modified)	
			NIOSH 7903	
			NIOSH 7906 (Modified)	
			OSHA ID-113 (Modified)	
			OSHA ID-128SG (Modified)	
			OSHA ID-182	
			OSHA ID-188	
			OSHA ID-190	
			OSHA ID-200	
			OSHA ID-202 (Modified)	
			OSHA ID-202 Passive (Modified)	
OSHA ID-214				
OSHA ID-215 v.2	LM-IC-16			
OSHA PV2119				
OSHA W4001				



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Chromatography Core	Ion Chromatography (IC)		NIOSH 7907	
	Ion Chromatography (IC)		NIOSH 7908	
	Ion Chromatography (IC)		NIOSH 7906 Version 2	
	Liquid Chromatography	HPLC/UV	NIOSH 2014	
	Liquid Chromatography	HPLC/UV	NIOSH 2016	
	Liquid Chromatography	HPLC/UV	NIOSH 2016 (Modified)	
	Liquid Chromatography	HPLC/UV	NIOSH 2532	
	Liquid Chromatography	HPLC/UV	NIOSH 2544 (Modified)	
	Liquid Chromatography	HPLC/UV	NIOSH 5004	
	Liquid Chromatography	HPLC/UV	NIOSH 5005	
	Liquid Chromatography	HPLC/UV	NIOSH 5008	
	Liquid Chromatography	HPLC/UV	NIOSH 5009	
	Liquid Chromatography	HPLC/UV	NIOSH 5029	
	Liquid Chromatography	HPLC/UV	NIOSH 5506	
	Liquid Chromatography	HPLC/UV	NIOSH 5601 (Modified)	
	Liquid Chromatography	HPLC/UV	NIOSH P&CAM 236	
	Liquid Chromatography	HPLC/UV	OSHA 1018	
	Liquid Chromatography	HPLC/UV	OSHA 105	
	Liquid Chromatography	HPLC/UV	OSHA 108	
	Liquid Chromatography	HPLC/UV	OSHA 25	
	Liquid Chromatography	HPLC/UV	OSHA 32	
	Liquid Chromatography	HPLC/UV	OSHA 42	
	Liquid Chromatography	HPLC/UV	OSHA 47	
	Liquid Chromatography	HPLC/UV	OSHA 55	
	Liquid Chromatography	HPLC/UV	OSHA 58 (Modified)	
	Liquid Chromatography	HPLC/UV	OSHA 60 (Modified)	
	Liquid Chromatography	HPLC/UV	OSHA 63	
	Liquid Chromatography	HPLC/UV	OSHA 64	
	Liquid Chromatography	HPLC/UV	OSHA 90	
	Liquid Chromatography	HPLC/UV	OSHA 98	
	Liquid Chromatography	HPLC/UV	OSHA IMIS P250	
	Liquid Chromatography	HPLC/UV	LM-LC-30	Abietic Acid
	Liquid Chromatography	HPLC/UV	OSHA PV2005	
Liquid Chromatography	HPLC/UV	OSHA PV2012		
Liquid Chromatography	HPLC/UV	OSHA PV2094		
Liquid Chromatography	HPLC/UV	OSHA PV2125		
Liquid Chromatography	HPLC/UV	Rohm & Hass 9901		
Liquid Chromatography	HPLC/UV	OSHA PV2017		
Liquid Chromatography	LC/MS	DuPont Method (Modified)		
Liquid Chromatography	LC/MS	NIOSH 2016 (Modified)	LM-LCMS-1, LM-LCMS-2	
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 (Modified)	
Spectrometry Core	Atomic Absorption	CVAA	OSHA ID-140 (Modified)	
Spectrometry Core	Atomic Absorption	CVAA	OSHA ID-145 (Modified)	



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Spectrometry Core	Inductively-Coupled Plasma	ICP/MS	NIOSH 6001 (Modified)	
			NIOSH 7301 (Modified)	
			NIOSH 7901 (Modified)	
		ICP/AES	NIOSH 7300 (Modified)	
			NIOSH 7301	
			NIOSH 7301 (Modified)	
			NIOSH 7303 (Modified)	LM-ICP-3; LM-ICP-8
			OSHA ID-1003	
			OSHA ID-121 (Modified)	
			OSHA ID-125G	
			OSHA ID-213 (Modified)	
	LM-ICP-9	Silane		
X-ray Diffraction (XRD)		NIOSH 7500		
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		NIOSH 9002	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
Miscellaneous Core	Gravimetric		HSE MDHS 14	
			NIOSH 0500	
			NIOSH 0600	
			NIOSH 5000	
			NIOSH 5023	
			NIOSH 5042	
			NIOSH 5524	
			OSHA 58	
OSHA ID-196				
Compressed/ Breathing Air Testing	Gas Chromatography	GC/ FID	LM-GAS-1	LMI-A5 In-House Method
			LM-GAS-3	LMI-A5 In-House Method
		GC/TCD	LM-GAS-1	LMI-A5 In-House Method
			LM-GAS-3	LMI-A5 In-House Method
		GC/ECD	LM-GAS-1	LMI-A5 In-House Method
		GC/XSD	LM-GAS-3	LMI-A5 In-House Method
	Gravimetric		NIOSH 0500	



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Pharmaceutical Testing	Liquid Chromatography	HPLC/ UV	LM-Pharma-1 (Glipizide)	Proprietary Pharmaceutical Method
			LM-Pharma-2 (Diflunisal)	Proprietary Pharmaceutical Method
			LM-Pharma-3 (Niacin)	Proprietary Pharmaceutical Method
			LM-Pharma-6 (Fluoxetine HCl)	Proprietary Pharmaceutical Method
		LC/MS	LM-Pharma-4 (Naproxen Sodium)	Proprietary Pharmaceutical Method
			LM-Pharma-5 (Ibuprofen)	Proprietary Pharmaceutical Method
Beryllium Testing	Inductively-Coupled Plasma	ICP/AES	OSHA ID-125G	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>