

Why A2LA Accreditation?



What does that mean?

Laboratory accreditation uses criteria and procedures specifically developed to determine technical competence. Specialist technical assessors conduct a thorough evaluation of all factors in a lab that affect the production of [testing or calibration] data. The criteria are based on the internationally accepted standard ISO/IEC 17025 (which is used for the evaluation of laboratories throughout the world) and other technical program requirements developed with regulators and specifiers. Laboratory accreditation bodies use the ISO/IEC 17025 standard specifically to assess factors relevant to a laboratory's ability to produce precise, accurate test and calibration data; including:

- technical competence of staff
- validity and appropriateness of test methods
- traceability of measurements and calibrations to national standards
- suitability, calibration and maintenance of test equipment
- testing environment
- sampling, handling and transportation of test items
- quality assurance of test and calibration data

Laboratory accreditation to ISO/IEC 17025 covers the same quality management system principles that are addressed in ISO 9001 registration. To ensure continued compliance, accredited laboratories are regularly re-assessed to check that they are maintaining their standard of technical expertise. These laboratories are also required to participate in regular proficiency testing programs (where applicable) as an on-going demonstration of their competence.

How does this benefit you as the customer?

Minimizes risk - You know you are choosing a technically competent lab that has a sound quality system in place

Avoids expensive retesting - Enhance your customers' confidence in your product by assuring them that it has been thoroughly evaluated by an independent, competent testing or calibration laboratory that has been assessed by a third party.

Reduce costs and improve acceptance of your goods overseas - Through a system of international agreements (e.g. International Laboratory Accreditation Cooperation [ILAC] Mutual Recognition Arrangement), accredited laboratories receive a form of international recognition, which allows their data to be more readily accepted in overseas markets. This recognition helps reduce costs by reducing or eliminating the need for retesting in the import country.

Laboratory accreditation provides formal recognition to competent laboratories, thus providing a ready means for customers to find reliable testing and calibration services able to meet their needs.

A2LA accreditation provides confidence in the measurement results.





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

LAWRENCE FACTOR, INC.
 X-ZAM LAB SERVICES
 4740 NW 157th Street
 Miami Lakes, FL 33014
 Lawrence Kaplan Phone: 305 430 0550

CHEMICAL

Valid To: July 31, 2018

Certificate Number: 0314.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on containerized breathing air:

<u>Test Technology</u>	<u>Analytes</u>	<u>LF Method</u>
Spectroscopy – FTIR	Carbon Dioxide*	LF-500, LF-501
	Carbon Monoxide*	LF-500, LF-501
	Hydrocarbons*	LF-500, LF-501
	Water Vapor*/ Dewpoint*	LF-500, LF-501
	Nitric Oxide*	LF-500, LF-501
	Sulfur Dioxide*	LF-500
	Halogenated Solvents	LF-500
	Acetylene	LF-500
	Nitrous Oxide	LF-500
	Halogenated Hydrocarbons	LF-500
	Nitrogen Dioxide*	LF-500, LF-501
Gas Chromatography – GC	Nitrogen	LF-505
	Oxygen	LF-505
Electrochemical	Oxygen*	LF-503, LF-501
Microgravimetry	Oil and Particles*	LF-502, LF-501
Microscopy	Particulates	LF-504
Calculation ¹	Nitrogen*	LF-501
Organoleptic	Odor	LF-506

¹ Note: The calculation of Nitrogen is not a test method; it is a calculation by difference

* Customers utilizing Lab-on-Locale™ for testing on these parameters

The following standards or portions of standards are applicable to the above testing:

1. Compressed Gas Association

CGA G-7.1 (2004²) Commodity Specification for Air: CGA Grades A, D, E, J, L, N
 CGA G-7.1 (2011) Commodity Specification for Air: CGA Grades A, D, E, J, L, N
 United States Pharmacopeia (2011) Medical Air USP

2. **National Fire Protection Association**
 NFPA 1500 Grades D, E, N (2007², 2013) Fire Department Occupational Safety and Health Program
 NFPA 99 (2005², 2012) Standard for Health Care Facilities
 NFPA 1404 (2006) Standard for Fire Service Respiratory Protection Training
 NFPA 1989 (2003², 2008², 2013) Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection
3. **Occupational Safety and Health**
 OSHA 29 CFR 1910.134 (2004) Major Requirements of OSHA's Respiratory Protection Standard
4. **U.S. Navy Diving Manual**
 US-NAVY-NAVSEA (0910-LP-103-8009-Rev. 5, 0910-LP-106-0957-Rev. 6)
 NAVSEA S9592-B3-MAN-010
5. **Canadian Standards Association**
 CAN/CSA Z180.1 (2005²) Compressed Breathing Air and Systems
 CAN/CSA Z180.1 (2010) Compressed Breathing Air and Systems
 CAN/CSA Z275.2 (2004²) Occupational Safety Code for Diving Operations
 CAN/CSA Z275.2 (2011) Occupational Safety Code for Diving Operations
6. **NOAA Diving Manual, Chapter 15**
 NITROX I and II (2003)
7. **IANTD/IAND Standards and Procedures Manual**
 IANTD/IAND Blending Standards (1993): Oxygen Compatible Air
8. **ISA - Instrument Society of America**
 ANSI ISA-S7.3-1975 (R1981)-ANSI/ISA-S7.0.01(1996) Quality Standard for Instrument Air
9. **ISO - International Organization for Standardization**
 ISO 8573-1:2001² Compressed Air-Part 1: Contaminants and Purity Classes
 ISO 8573-1:2010 Compressed Air-Part 1: Contaminants and Purity Classes
 ISO 8573-2 (2007) Test Methods for Oil Aerosol Content
 ISO 8573-3 (1999) Test Method for Measurement Humidity
 ISO 8573-4 (2001²) Test Methods for Solid Particle Content
 ISO 8573-4 (2002) Test Methods for Solid Particle Content
 BS 3406-4 (1993) Methods for Determination of Particle Size Distribution
10. **US GSA Federal Specification**
 BB-A-1034B (1995) Compressed Air, Breathing
11. **European Standard**
 EN 12021:1998² (Respiratory Protective Devices - Compressed Air for Breathing Apparatus)
 EN 12021:2014 (Respiratory Protective Devices - Compressed Air for Breathing Apparatus)
12. **European Pharmacopeia 6.0**
 Medicinal Air (2008)
13. **Australian/New Zealand Standard**
 AS/NZS 2299.1 (2007) Operational Diving Operations, Part 1: Standard Operational Practice
 AS/NZS 1715 (2009) Air Quality (Compressors or Cylinders) for Supplied-Air Respirators
 AS 2568 (1991) Purity of Compressed Medical Breathing Air (6.1 - 6.8 and 6.10 - 6.12)
14. **Brazilian Standard**
 NBR 12543:1999 - Respiratory Protective Devices
15. **Norwegian Standard**
 441 (2004)
16. **Oils, Lubricants, and Petroleum Products**
 Infrared Spectral Comparisons of Organic Sample Material (Perkin-Elmer Corp., 1983)



17. Scotland Ministry of Defense

Defense Standard 68-284, Issue 3,03 April 2009, Annex A, par A.1, A.2, A.3

² *This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.*

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Accredited Laboratory

A2LA has accredited

LAWRENCE FACTOR, INC.

Miami Lakes, FL

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 7th day of March 2017.

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President and CEO
For the Accreditation Council
Certificate Number 0314.01
Valid to July 31, 2018

For the types of tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.