



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

AL-TAR Services, Inc.
823 Kifer Rd.
Sunnyvale, CA 94086

has been assessed by ANAB
and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

AC-1457
Certificate Number


ANAB Approval

Certificate Valid: 04/26/2018-05/12/2020
Version No. 009 Issued: 04/26/2018



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 April 2017).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

AL-TAR Services, Inc.

823 Kifer Rd.
Sunnyvale, CA 94086
Steve Firkey
408-245-1905

CALIBRATION

Valid to: May 12, 2020

Certificate Number: AC-1457

Mass and Mass Related

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Balance Class I	1 mg to 1 g (1 to 100) g (100 to 1 000) g	0.003 1 mg 0.8 mg 1.33 mg	Class 1 Weights
Balance Class II	(1 000 to 5 000) g	14.4 mg	Class 1 Weights
Rotational Speed Sensors	Up to 20 000 RPM	4 RPM	Monarch PT99, Extech 461920 Hand Held Tachometers
Pipettes	(0.2 to 100) μ l (100 to 1 000) μ l 1 000 μ l to 10 ml	0.43 μ l 1.79 μ l 2.63 μ l	Laboratory Balance Mettler AT20 and Pipette Tracker Software

Thermodynamic

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Temperature	(-80 to 140) $^{\circ}$ C	0.086 $^{\circ}$ C	Hart 1521 and 5627 PRT
Temperature	(140 to 1 000) $^{\circ}$ C	3 $^{\circ}$ C	Fluke 51 and TC
Humidity	(10 to 80) % RH	3% RH	Vaisala MI70/ HMP76

Time and Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Stopwatches / Timers	Up to 10 h	0.21 s/h	Extech 365515 Timer

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1457.



Vice President

