

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

TSI Incorporated

500 Cardigan Road Shoreview, MN 55126

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at www.anab.org.

202

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 20 February 2022 Certificate Number: AC-2850





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND ANSI/NCSL Z540-1-1994 (R2002)

TSI Incorporated

500 Cardigan Road Shoreview, MN 55126 Larry Lemanski

CALIBRATION

Valid to: **February 20, 2022** Certificate Number: **AC-2850**

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Airborne particle counting efficiency ¹	Particle Size		Electrometer, 3068B CPC, 3750/3772 ISO 27891:2015
	10 nm	0.08	
	15 nm	0.07	
	23 nm	0.07	
	41 nm	0.1	
	55 nm	0.08	
	Particle Concentration		
	Range		Electrometer, 3068B CPC, 3750/3772 ISO 27891:2015
Airborne particle	300 counts/cm ³	_ 0.07	
concentration counting	600 counts/cm ³	0.07	
efficiency ¹	1 000 counts/cm ³	0.07	
efficiency	2 000 counts/cm ³	0.07	
Calibration factor for condensation particle counters (CPC/PNC)	4 000 counts/cm ³	0.06	
	6 000 counts/cm ³	0.06	
	8 000 counts/cm ³	0.06	
	10 000 counts/cm ³	0.05	
	25 000 counts/cm ³	0.05	
	50 000 counts/cm ³	0.04	

Mass and Mass Related

Version 002 Issued: December 29, 2020

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pressure Differential	(0 to 15) inH ₂ O	0.21 % of reading + 0.003 1 inH ₂ O	MKS Pressure Transducer





Mass and Mass Related

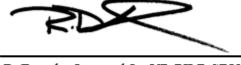
Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pressure – Barometric	(4 to 20) psia	0.021 psi	Setra 370 Pressure Gage
Air Velocity	(35 to 8 000) fpm	2.6 % of reading	Westenberg Engineering Pitot Tube

Thermodynamics

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature	0 °C 60 °C	0.12 °C	ThermoFisher Scientific Temperature Baths
Humidity	(9.8 to <mark>95) %RH</mark>	0.61 %RH	Thunder Scientific 2500 Humidity Chamber

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%.

- 1. Unitless linear measure.
- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2850.



R. Douglas Leonard Jr., VP, PILR SBU



