

**JBW**

# CERTIFICATE OF CALIBRATION

FINAL DATA

## NIST\*-Traceable Certification for SAS Air Sampler

\*National Institute of Standards and Technology

Model: SUPER " 100 "

Date: 9-24-19

Serial No. : 14-D-09351 w/ss head 27605

Next Cal. Due: 9-24-20

Company: Aerobiology Laboratory

Cal. Technician: [Signature]

Checked by: [Signature]

Temperature, °F: 70

Barometric Pressure, in. Hg: 29.9

Temp. and Pressure Correction Factor: .996

Anemometer Reading, meters/second: .286

Corrected Air Velocity, meters/second: .285

Air Flow, liters/minute: 100.0

Display Setting (Sample Volume)	Sampling Time (Minutes)	
100 liters:	<u>1.0</u>	Minutes
500 liters:	<u>5.0</u>	Minutes
1000 liters:	<u>10.0</u>	Minutes

**Comments:**

1. Accuracy =  $\pm 5\%$  Total
2. Calibrated at battery output 9.7 volts. BBL TSA Petri
3. Calibrated with contact plate in place. Lot 9133662 Exp. 10-22-19
4. Anemometer serial number T95451921005 (see attached certificate of calibration).

**JBW & Associates, Inc.**  
10242 Little Rock Lane  
Frederick, Maryland 21702

**Bioscience International**  
Telephone: 301-230-0072





Calibration complies with ISO/IEC 17025, ANSI/NC SL Z540-1, and 9001



Cert. No.: 1015-9767818

Traceable® Certificate of Calibration for Stopwatch

Manufactured for and distributed by: VWR International LLC Radnor Corporate Center, Bldg 1, Ste 200, 100 Matsonford Road, Radnor, PA, 19087

Instrument Identification:

Model: 62379-058, S/N: 181557362 Manufacturer: Control Company

Standards/Equipment:

Table with 4 columns: Description, Serial Number, Due Date, NIST Traceable Reference. Row 1: Non-Contact Frequency Counter, 26.66887, 17 May 2019, 1000425907

Certificate Information:

Technician: 332 Procedure: CAL-01 Cal Date: 30 Aug 2018 Cal Due Date: 30 Aug 2020
Test Conditions: 64.69%RH 23.62°C 1016mBar

Calibration Data: (New Instrument)

Table with 12 columns: Unit(s), Nominal, As Found, In Tol, Nominal, As Left, In Tol, Min, Max, ±U, TUR. Row 1: sec/24hr, N.A., N.A., In Tol, 0.000, -0.100, Y, -0.432, 0.432, 0.041, >4:1

This certificate indicates Traceability to standards provided by (NIST) National Institute of Standards and Technology and/or a National Standards Laboratory.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=(Max-Min)/2; Min=As Left Nominal(Rounded) - Tolerance; Max= As Left Nominal(Rounded) + Tolerance;

Nicol Rodriguez, Quality Manager

Aaron Jellie, Technical Manager

Note:

Maintaining Accuracy:

In our opinion once calibrated your Stopwatch should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Stopwatch change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598
Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.control3.com

Control Company is an ISO/IEC 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2008 Quality Certified by DNV GL, Certificate No. CERT-01805-2008-AQ-HOU-RvA.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).