

BIOSCIENCE INTERNATIONAL

Innovative Microbiology Products
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CERTIFICATE OF CALIBRATION

Model:	SAS Super 180
Air Sampler Serial #:	00-C-1453
Air Sampler Head Serial #:	4508
Customer:	Aerobiology Laboratory
Customer Asset ID #:	n/a
Calibration performed at:	JBW site 10242 Little Rock Ln Frederick, MD 21702

Cal. Date:	14 Jan 2021
Cal. Due:	14 Jan 2022 (12 months)
Procedure:	EOP-030
Certificate #:	00-C-1453-2210
Volume sampled (L):	1000
Calibrated w/media type:	BBL TSA Petri
Plate Lot #:	0231573
Plate Exp Date:	1/28/2021

	As Found	In Tolerance	As Left	In Tolerance	Acceptable Range
Battery output (Volts):	9.9	n/a	9.6	n/a	>8.2
Temperature (F°):	70.2	n/a	70.2	n/a	59 - 95
Barometric pressure (in. HG):	30.0	n/a	30.0	n/a	n/a
Time to sample 1000 Liters (min)	5.50	n/a	5.55	n/a	n/a
Temp. & Pressure Standardization Factor:	1.00	n/a	1.00	n/a	n/a
Air velocity reading (ft/min)	101.0	n/a	100.0	n/a	n/a
Air velocity reading (m/sec)	0.513	n/a	0.508	n/a	n/a
Standardized air velocity reading (m/sec)	0.514	n/a	0.509	n/a	n/a
Standardized Air Flow (L/min)	181.9	Yes	180.1	Yes	171 - 189

Additional heads inspected and determined to be within +/-2%: n/a
 Additional service, preventative maintenance, or calibration notes: n/a

Bioscience International certifies that the above described instrument conforms to the original manufacturer's tolerances for the parameters listed (not applicable to As Found data) & has been calibrated in accordance with ISO 17025:2017 guidelines using standards whose accuracies are traceable to the U.S. National Institute of Standards & Technology, have been verified with respect to instrumentation whose accuracy is traceable to NIST, or are derived from accepted values of physical constants. CMC test uncertainty is +/-2.2%. Instruments are calibrated with a test uncertainty ratio of 4:1 or greater whenever possible, with uncertainty defined as within a 95% confidence interval using a coverage factor of k = 2. In all cases, statistical methods are used to minimize uncertainty using the best commercially available methods. In Tolerance conditions are based on test results falling within the Acceptable Range. Measurement uncertainty is provided separately & independent of the decision rule. Voltage readings are for preventative maintenance purposes & not part of the calibration; values other than voltage, temperature, pressure, & air velocity are calculated values. Calibration results relate only to the items listed above; e.g., the instrument should be recalibrated prior to switching to a different media size (e.g., from 90mm Petri dishes to 55mm contact plates or vice versa).

<u>Measurement Standards</u>			
ID	Description	Last Cal.	Cal. Due
J-T95451921005	Velocity	7/29/2020	7/29/2021
J-10510922-200515237	Temperature & Pressure	8/31/2020	8/31/2022

Work performed by / date:  1-14-21 Reviewed by / date:  1-14-21