



## Calibration Report

<b>Product Name</b>	Handheld Laser Particle Counter	
<b>Model Number</b>	P611	
<b>Serial Number</b>	Sample Certificate	
<b>Calibration Number</b>	Sample Certificate	
<b>Calibration Date</b>	July 17, 2018	
<b>Temperature &amp; Humidity</b>	24.0 °C	33.0 % RH
<b>Atmospheric Pressure</b>	1010 hPa	

Item	Procedure/Standard	Result																									
<b>Flow Rate</b>	The flow rate shall be within 2.83L/min $\pm$ 3%.	2.83 L/min	Pass																								
<b>False Count Rate</b>	Based on the standard of JIS 9921 with an upper 95% confidence limit, it must be less than 1 count in 5 minutes. The standard of the zero test is as follows: The total count of 500 minutes must be less than 83.	0	Pass																								
<b>Threshold Voltage</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">The threshold voltage for each particle size of the standard PSL particle shall be 10V or lower. Also, there shall be a peak and valley in the signal waveform distribution.</td> <td style="width: 20%;">0.3 <math>\mu</math>m</td> <td style="width: 20%;">0.600V</td> </tr> <tr> <td></td> <td>0.5 <math>\mu</math>m</td> <td>0.310V</td> </tr> <tr> <td></td> <td>0.7 <math>\mu</math>m</td> <td>0.506V</td> </tr> <tr> <td></td> <td>1.0 <math>\mu</math>m</td> <td>0.800V</td> </tr> <tr> <td></td> <td>2.0 <math>\mu</math>m</td> <td>1.390V</td> </tr> <tr> <td></td> <td>2.5 <math>\mu</math>m</td> <td>1.908V</td> </tr> <tr> <td></td> <td>5.0 <math>\mu</math>m</td> <td>4.500V</td> </tr> <tr> <td></td> <td>10.0 <math>\mu</math>m</td> <td>7.063V</td> </tr> </table>	The threshold voltage for each particle size of the standard PSL particle shall be 10V or lower. Also, there shall be a peak and valley in the signal waveform distribution.	0.3 $\mu$ m	0.600V		0.5 $\mu$ m	0.310V		0.7 $\mu$ m	0.506V		1.0 $\mu$ m	0.800V		2.0 $\mu$ m	1.390V		2.5 $\mu$ m	1.908V		5.0 $\mu$ m	4.500V		10.0 $\mu$ m	7.063V		Pass
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<b>Counting Efficiency</b>	1 For the 0.3 $\mu$ m PSL standard, the particle counts in the 0.3 $\mu$ m range of the instrument to be calibrated shall be within 50 $\pm$ 20% of the standard unit.	44.11%	Pass																								
	2 For the 0.5 $\mu$ m PSL standard, the particle counts in the 0.3 $\mu$ m range of the instrument to be calibrated shall be within 100 $\pm$ 10% of the standard unit.	108.39%	Pass																								
<b>Size Resolution</b>	For the 0.5 $\mu$ m PSL standard, the size resolution shall be equal to or less than 15%.	13.8%	Pass																								

*Airy Technology, Inc. hereby certifies that the calibration performed on the above described instrument meets the requirements of ISO 21501-4 and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST), or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. This document shall not be reproduced except in full without the written consent of Airy Technology Inc.*

Approve: Robert Scannell  
 Authorized Airy Calibration Technician

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 USA



## NIST Report

<b>Product Name</b>	Handheld Laser Particle Counter	
<b>Model Number</b>	P611	
<b>Serial Number</b>	Sample Certificate	
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<b>Temperature &amp; Humidity</b>	24.0 °C	33.0 % RH
<b>Atmospheric Pressure</b>	1010 hPa	

Units expressed in  $\mu\text{m}$

Calibration Particles								
Size	Mean $\emptyset$	Tolerance	Dist	Std Dev	Source	Chemistry	Lot ID	Exp Date
0.2	0.203	0.005	0.0053	2.6%	Thermo	Polystyrene Nanospheres	179339	20-Jan
0.3	0.303	0.006	0.0047	1.6%	Thermo	Polystyrene Nanospheres	164765	19-Jan
0.5	0.508	0.008	0.0085	1.7%	Thermo	Polystyrene Nanospheres	177807	19-Dec
0.7	0.702	0.006	0.0049	0.7%	Thermo	Polystyrene Nanospheres	179741	20-Jan
1.0	1.03	0.011	0.01	1.00%	Thermo	Polystyrene Microspheres	192847	21-Jan
2.0	2.02	0.015	0.021	1.00%	Thermo	Polystyrene Microspheres	172292	19-Aug
2.5	2.504	0.027	0.025	1.00%	Thermo	Polystyrene Microspheres	45024	18-Aug
3.0	2.995	0.024	0.032	1.1%	Thermo	Polystyrene Microspheres	177421	19-Nov
5.0	5.027	0.047	0.05	1.0%	Thermo	Polystyrene Microspheres	177110	19-Nov
10.0	10.0	0.4	1	10.00%	Thermo	Polystyrene Dri-Cal Particles	187001	20-Jul

Calibration Standards				
Type	Model	Serial	Report	Cal Due
Flow Meter	4043	4043 0706 003	800456537	4/4/2019
Temp/RH Meter	M170/HMP75	J0320022/J054001	BOS181730013	4/24/2019
Barometer	1081	170515986	1081-8687920	7/11/2019
Particle Counter	LPS002	110801	17071009	10/30/2018

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