

## PIPETTE CALIBRATION REPORT

	Document No.	Operator	Calibration date	CALIBRATION RESULT
Current calibration	<b>19-10-22/00584</b>	<b>Prosper Mushore</b>	<b>22/10/2019 11:25:31</b>	<b>ACCEPTED</b>

### PIPETTES DATA

Manufacturer:	StarLab
Model/symbol:	ErgoOne / ISO / 3 StarCustom
Range/increment/tips:	10 - 100 / 0.1 / 100
Type:	Variable: 1 channel
Unit:	µl
Serial No:	<b>117612Z</b>
Identification No:	<b>N/A</b>

### ENVIRONMENTAL CONDITIONS

Air temperature [°C]	21.86
Pressure [hPa]	1009.8
Humidity [%]	51.7
Z factor [ml/g]	1.0030
Factor Y	1.0000
Temp. of water [°C]	20.68

### Applicant

P-Squared Technologies  
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Pipette Calibration  
Prosper Mushore  
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### AVERAGE RESULTS

Volume [µl]	Weight [g]	Norm, systematic error [%]	Norm, random error [%]
<b>10</b>	0.009 97	3	1

Canal No / Weighings	Average volume [µl]	Syst. err. [%] / [µl]	Rand. err. [%] / [µl]	Measurement uncertainty [µl]	Result A	Result CV			
Canal 1	10.06	0.62 / 0.06	0.23 / 0.02	0.0314	✓	✓			
0.009 997	0.009 987	0.010 044	0.010 043	0.010 022	0.010 06	0.010 041	0.010 035	0.010 043	0.010 048

Volume [µl]	Weight [g]	Norm, systematic error [%]	Norm, random error [%]
<b>50</b>	0.049 852	1	0.3

Canal No / Weighings	Average volume [µl]	Syst. err. [%] / [µl]	Rand. err. [%] / [µl]	Measurement uncertainty [µl]	Result A	Result CV			
Canal 1	50.29	0.57 / 0.29	0.13 / 0.07	0.0761	✓	✓			
0.050 014	0.050 032	0.050 13	0.050 131	0.050 182	0.050 128	0.050 19	0.050 201	0.050 16	0.050 202

Volume [µl]	Weight [g]	Norm, systematic error [%]	Norm, random error [%]
<b>100</b>	0.099 704	0.8	0.2

Canal No / Weighings	Average volume [µl]	Syst. err. [%] / [µl]	Rand. err. [%] / [µl]	Measurement uncertainty [µl]	Result A	Result CV			
Canal 1	100.61	0.61 / 0.61	0.15 / 0.15	0.1442	✓	✓			
0.100 007	0.100 25	0.100 106	0.100 369	0.100 335	0.100 465	0.100 386	0.100 36	0.100 444	0.100 439

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**SUMMARY**

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**Calibration**

Basis for calibration: Ex  
Callibration method: ISO 8655  
Measurements per canal 10  
Mass unit g  
Next calibration: 22/04/2020 00:00:00

Comments: Serviced. Parts replaced: None. Lab humidity guaranteed through the use of a vapour trap.

Operator: Prosper Mushore

Operator signature -----

**Balance**

Name/model: Radwag MYA 21.4Y.P  
Unit: g  
Serial No: 597045  
Certificate No 18100636  
Date of next adjustment: 2019-11-02

**Thermo-higro-barometer**

Manufacturer: Radwag  
Name/type: Thermo-Hygro-Barometer  
Serial No: A148336 / A148340  
Certificate No 1908P8699-1\_21907046-1  
Date of next adjustment: 2020-08-21