CANTIUM SCIENTIFIC
ENGINEERING FOR SCIENCE

Qualisair™ / MicroBio
Factory Inspection & Calibration

PASS

MicroBio Serial Number	**010815140**
Certificate Number	**CC010815140-6**

New Sampler	☐
Previous Certificate Suffix	5

General Information

Product Owner	**Majaseen LLC**	**Calibration Date**	19 April 2022	**Approved Signatory**	S. Plumridge CEng MIET FRSA Director
Address	Ravila 14a-2019 Tartu 50411 Estonia	**Calibration Due**	19 April 2023		
		Calibrated By	DCP	**PO / Name**	Jane Oja
		Distributor		**CO / RMA**	RMA-00519
		Calibration Methods	Procedure WI422r2	**Asset Number**	

Model / Configuration

Model	MicroBio MB2-HiFlow	
Sampler flow rate	180	*L/min*
Sampling head holes	400	*Holes*
Sampling head hole diameter	1.0	*mm*
Plate Fitted	90mm Petri Dish	
Recorded Total Volume	153306	*Litres*
Recorded Total Samples	743	

Sampler Calibration Requirements

Target Volumetric Flow	180	*L/min*
Target Anemometer Velocity	4.99	*m/s*
Allowed Deviation	5.0	*%*
Upper Anemometer Velocity	5.2395	*m/s*
Lower Anemometer Velocity	4.7405	*m/s*

Inspection

Sampling head	OK
Battery box lid	OK
Battery contacts	OK
Keypad	OK
Plate springs	OK
Head spring	OK
Enclosure	OK
Battery Pack	Laboratory cells used

qCR Kit Calibration Parameters

Parameter	Value	Units
Calibration Factor	36.04	
Lab temperature	19.50	ºC
Lab pressure	1015.4	mbar
Serial number	41426690101	
Calibration date	22 Jul 2021	
Calibration due date	22 Jul 2022	
Certificate number	CC41426690101-1	

Measurements

Reading No.	Inspection Anemometer Target = 4.99 m/s	Adjusted	
1	5.19		*m/s*
2	5.09		*m/s*
3	5.11		*m/s*
4	5.14		*m/s*
5	5.17		*m/s*
6	5.14		*m/s*
7	5.13		*m/s*
8	5.10		*m/s*
9	5.07		*m/s*
10	5.12		*m/s*
11	5.10		*m/s*
12	5.02		*m/s*
Mean Velocity	5.115	0.000	*m/s*
Std. Deviation	0.0450	0.0000	
Confidence 95%	0.0255	0.0000	
Upper Range	5.1405	0.0000	*m/s*
Lower Range	5.0895	0.0000	*m/s*
Action	**NONE**	**NONE**	

Sampler Performance

	Inspection	Adjusted	
Flow Rate Rate	**184.34**		*L/min*
Upper	**185.26**		*L/min*
Lower	**183.43**		*L/min*
d_{50} (Theoretical)	**1.67**		*µm*
U_j (Theoretical)	**9.78**		*m/s*

Notes

Inspection Modelling

Q	# holes	Dj	Cc	ETA	stk50	Particle Density	d50 SQRT(Cc)	S_{50}	d50	Uj	Aj
lpm		mm		g/cm-sec	0.22 circ	g/cm3	µm	mm	µm	m/sec	mm2
184.34	400	1.00	1.28	1.81E-04	0.22	1.03	1.89	0.110	1.67	9.78	0.785

Adjustment Modelling

Q	# holes	Dj	Cc	ETA	stk50	Particle Density	d50 SQRT(Cc)	S_{50}	d50	Uj	Aj
lpm		mm		g/cm-sec	0.22 circ	g/cm3	µm	mm	µm	m/sec	mm2
	400	1.00	1.28	1.81E-04	0.22	1.03	0.00	0.110	0.00	0.00	0.785

Lab conditions: 20ºC ±5% 1013.25mBar ±2.5%
Calibration procedure: https://www.dropbox.com/s/xbmqaagjcak1lfh/WI422r2%20-%20MicroBio%20Calibration%20with%20Qualisair%20qCR%20Kit.pdf?dl=0