Please enter these **calibration parameters** and the **Lot No.** into the BioLection software!

pH calibration parameters Lot No. 1842 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.76	68.63	68.50	68.38	68.25	68.12	67.99
ϕ max	14.14	14.03	13.92	13.80	13.69	13.58	13.47
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.73
pH_0	6.28	6.28	6.27	6.26	6.25	6.25	6.24
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	67.87	67.74	67.61	67.48	67.35	67.23	67.10
ϕ max	13.36	13.25	13.14	13.03	12.92	12.80	12.69
dpH	0.73	0.73	0.73	0.73	0.73	0.73	0.73
pH_0	6.23	6.23	6.22	6.21	6.20	6.20	6.19
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	66.97	66.84	66.71	66.59	66.46	66.33	66.20
ϕ max	12.58	12.47	12.36	12.25	12.14	12.03	11.92
dpH	0.73	0.73	0.73	0.73	0.73	0.73	0.73
pH_0	6.18	6.18	6.17	6.16	6.15	6.15	6.14

pH sensor properties

Dynamic range	pH 2.45 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.45 - 5.35; ± 0.1 pH at pH 5.35 – 6.35; ± 0.25 pH at pH 6.35 - 8.10 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 6 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	sensor material can be degraded by some microorganisms
Cross-sensitivity	Reduced to ionic strength (salinity); high concentration of fluorescent molecules in the visible range can interfere (GFP, (e)YFP); complex media can cause a pH-shift (peptone, yeast extract)
Basic material	pH sensor LG1-1737-01 (at least stable for 7 days with CertiPUR-buffer) **pH sensors are light-sensitive; please protect them from direct light!**

pH calibration

Buffer	CertiPUR Reference Material Buffer solutions Set (pH 1.00 ± 0.01 / pH 2.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = RoundWellPlate (MTP-R48-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser.3188-RD, gain 8)
Date of calibration	2018/10/19

HEADQUARTERS EUROPE
m2p-labs GmbH
Arnold-Sommerfeld-Ring 2
52499 Baesweiler, Germany
Tel.:+ 49 - 2401 805 330
Fax:+49 - 2401 805 33
info@m2p-labs.com

USA / CANADA
m2p-labs, Inc.
400 Oser Ave, Suite 1650
Hauppauge, NY 11788, USA
Phone:+1 631 501 1878
Fax:+1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC
m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone:+852 6092 6778
Fax:+852 3594 6381
infoAsia@m2p-labs.com

Please enter these **calibration parameters** and the **Lot No.** into the BioLection software!

DO calibration parameters Lot No. 1842 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.43	68.41	68.39	68.36	68.34	68.32	68.29
ϕ cal100	43.42	43.21	42.99	42.77	42.56	42.34	42.13
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	68.27	68.25	68.22	68.20	68.17	68.15	68.13
ϕ cal100	41.91	41.70	41.48	41.26	41.05	40.83	40.62
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	68.10	68.08	68.06	68.03	68.01	67.99	67.96
ϕ cal100	40.40	40.18	39.97	39.75	39.54	39.32	39.10

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O_2 (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O_2 per day (sampling interval of 6 min)
Response time (t90)	< 30 s
Temperature range	5 – 50°C
Sensor stability	sensor material can be degraded by some microorganisms
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride, Chlorine gas; high concentration of fluorescent molecules in the visible range can interfere (mCherry, tdTomato, dsRed, nile red); complex media can cause a DO-shift
Basic material	Oxygen sensor RF-07/2018 (at least stable for 7 days with CertiPUR-buffer)
	DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = RoundWellPlate (MTP-R48-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2018/10/19

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Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	551699
Date of sterilization	2018/10/08

HEADQUARTERS EUROPE
m2p-labs GmbH
Arnold-Sommerfeld-Ring 2
52499 Baesweiler, Germany
Tel.:+ 49 - 2401 805 330
Fax:+49 - 2401 805 33
info@m2p-labs.com

USA / CANADA
m2p-labs, Inc.
400 Oser Ave, Suite 1650
Hauppauge, NY 11788, USA
Phone:+1 631 501 1878
Fax:+1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC
m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone:+852 6092 6778
Fax:+852 3594 6381
infoAsia@m2p-labs.com