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

pH calibration parameters Lot No. 1815 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.68	68.59	68.50	68.40	68.31	68.22	68.13
ϕ max	13.43	13.34	13.26	13.17	13.08	12.99	12.91
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH_0	6.41	6.40	6.39	6.38	6.38	6.37	6.36
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	68.04	67.95	67.86	67.76	67.67	67.58	67.49
ϕ max	12.82	12.73	12.64	12.56	12.47	12.38	12.29
dpH	0.76	0.76	0.76	0.76	0.76	0.75	0.75
pH_0	6.36	6.35	6.34	6.33	6.33	6.32	6.31
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	67.40	67.31	67.22	67.12	67.03	66.94	66.85
ϕ max	12.21	12.12	12.03	11.94	11.86	11.77	11.68
dpH	0.75	0.75	0.75	0.75	0.75	0.75	0.75
pH_0	6.31	6.30	6.29	6.28	6.28	6.27	6.26

pH sensor properties

Dynamic range	pH 2.50 – 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.45 – 5.40; ± 0.1 pH at pH 5.40 – 6.40; ± 0.25 pH at pH 6.40 – 8.15 (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 BMS-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 3.00 ± 0.01 / pH 4.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3188-RD, gain 8)
Date of calibration	2018/05/16

EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2 | 52499 Baesweiler | Germany
Phone +49-2401-805-330 | Fax: +49-2401-805-333
info@m2p-labs.com | support@m2p-labs.com

USA

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 | supportUS@m2p-labs.com

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

DO calibration parameters Lot No. 1815 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.02	67.99	67.96	67.92	67.89	67.86	67.83
ϕ cal100	44.65	44.42	44.18	43.95	43.71	43.48	43.24
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	67.79	67.76	67.73	67.70	67.66	67.63	67.60
ϕ cal100	43.01	42.77	42.54	42.30	42.07	41.83	41.60
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	67.57	67.54	67.40	67.47	67.44	67.41	67.37
ϕ cal100	41.36	41.13	40.89	40.66	40.42	40.19	39.95

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 Redflash-M2P01/2017 (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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.39 (DO Ser. 4170-RD, gain 4)
Date of calibration	2018/05/16

_____

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	499015
Date of sterilization	2018/05/04

EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2 | 52499 Baesweiler | Germany
Phone +49-2401-805-330 | Fax: +49-2401-805-333
info@m2p-labs.com | support@m2p-labs.com

USA

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 | supportUS@m2p-labs.com