

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

pH calibration parameters Lot No. 1816 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.38	68.27	68.16	68.05	67.95	67.84	67.73
ϕ max	12.44	12.35	12.25	12.16	12.07	11.98	11.89
dpH	0.78	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.41	6.40	6.39	6.38	6.37	6.36	6.35
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.62	67.51	67.41	67.30	67.19	67.08	66.97
ϕ max	11.80	11.71	11.62	11.53	11.44	11.34	11.25
dpH	0.77	0.77	0.77	0.77	0.76	0.76	0.76
pH ₀	6.34	6.33	6.32	6.31	6.30	6.29	6.29
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.87	66.76	66.65	66.54	66.44	66.33	66.22
ϕ max	11.16	11.07	10.98	10.89	10.80	10.71	10.62
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH ₀	6.28	6.27	6.26	6.25	6.24	6.23	6.22

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 - 5.40; ± 0.1 pH at pH 5.40 - 6.55; ± 0.25 pH at pH 6.55 - 8.25 (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 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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3188-RD, gain 8)
Date of calibration	2018/06/14

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

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DO calibration parameters Lot No. 1816 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	68.69	68.66	68.64	68.61	68.59	68.56	68.54
φ cal100	44.74	44.51	44.27	44.03	43.79	43.56	43.32
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	68.51	68.48	68.46	68.43	68.41	68.38	68.36
φ cal100	43.08	42.84	42.61	42.37	42.13	41.89	41.66
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	68.33	68.31	68.28	68.26	68.23	68.20	68.18
φ cal100	41.42	41.18	40.95	40.71	40.47	40.23	40.00

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-01/2017 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2018/06/14

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	507478
Date of sterilization	2018/05/31

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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