

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

pH calibration parameters Lot No. 1808 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	65.05	64.96	64.86	64.77	64.67	64.58	64.48
ϕ max	16.78	16.77	16.76	16.74	16.73	16.72	16.71
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.43	6.42	6.42	6.41	6.41	6.40	6.40
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.39	64.29	64.19	64.10	64.00	63.91	63.81
ϕ max	16.69	16.68	16.67	16.65	16.64	16.63	16.62
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.39	6.39	6.38	6.38	6.37	6.36	6.36
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.72	63.62	63.53	63.43	63.34	63.24	63.15
ϕ max	16.60	16.59	16.58	16.56	16.55	16.54	16.53
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.35	6.35	6.34	6.34	6.33	6.33	6.32

pH sensor properties

Dynamic range	pH 3.85 - 8.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.80; ± 0.1 pH at pH 4.80 – 7.45; ± 0.25 pH at pH 7.45 - 8.05 (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 HP8-1427-02_4 (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-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -1.180 (pH Ser.3111-RD, gain 7)
Date of calibration	2018/03/29

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. 1808 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.30	72.24	72.18	72.12	72.06	72.00	71.94
ϕ cal100	46.77	46.47	46.17	45.87	45.56	45.26	44.96
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.88	71.82	71.76	71.70	71.64	71.58	71.52
ϕ cal100	44.66	44.35	44.05	43.75	43.44	43.14	42.84
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.46	71.40	71.34	71.28	71.22	71.16	71.10
ϕ cal100	42.54	42.23	41.93	41.63	41.33	41.02	40.72

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 Pst3-HG-1426-03_3(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-02-000F-0032
Calibration phase offset	DO -360.59 (DO Ser.4103-RD, gain 7)
Date of calibration	2018/03/29

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	483330
Date of sterilization	2018/03/22

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