

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

pH calibration parameters Lot No. 1814 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.65	64.57	64.49	64.41	64.33	64.25	64.17
φ max	17.04	17.03	17.02	17.01	17.00	16.99	16.98
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.51	6.50	6.49	6.48	6.47	6.47	6.46
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	64.10	64.02	63.94	63.86	63.78	63.70	63.62
φ max	16.97	16.96	16.95	16.95	16.94	16.93	16.92
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.45	6.44	6.43	6.42	6.41	6.41	6.40
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.54	63.47	63.39	63.31	63.23	63.15	63.07
φ max	16.91	16.90	16.89	16.88	16.87	16.86	16.85
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.39	6.38	6.37	6.36	6.35	6.34	6.34

pH sensor properties

Dynamic range	pH 3.90 - 8.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.90; ± 0.1 pH at pH 4.90 – 7.50; ± 0.25 pH at pH 7.50 - 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	2018/04/25

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. 1814 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.95	71.91	71.88	71.84	71.81	71.77	71.74
ϕ cal100	44.56	44.35	44.13	43.91	43.70	43.48	43.27
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.70	71.67	71.64	71.60	71.57	71.53	71.50
ϕ cal100	43.05	42.84	42.62	42.41	42.19	41.97	41.76
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.46	71.43	71.39	71.36	71.32	71.29	71.25
ϕ cal100	41.54	41.33	41.11	40.90	40.68	40.46	40.25

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- 1742-01 (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	2018/04/25

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	490806
Date of sterilization	2018/04/16

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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