

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

pH calibration parameters Lot No. 2010201 (BioLector® II/Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.59	68.52	68.46	68.39	68.32	68.25	68.19
φ max	10.46	10.41	10.36	10.31	10.26	10.21	10.17
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.24	6.23	6.22	6.21	6.20	6.19	6.18
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.12	68.05	67.98	67.92	67.85	67.78	67.71
φ max	10.12	10.07	10.02	9.97	9.92	9.87	9.82
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.17	6.16	6.15	6.14	6.13	6.12	6.11
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.65	67.58	67.51	67.44	67.38	67.31	67.24
φ max	9.77	9.72	9.67	9.62	9.57	9.52	9.47
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.10	6.09	6.08	6.07	6.06	6.05	6.04

pH sensor properties

Dynamic range	pH 3.75 – 8.2
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 – 4.85; ± 0.1 pH at pH 4.85 – 7.10; ± 0.25 pH at pH 7.10 – 7.50 (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 LG1-1840-01_2 (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 2.00 ± 0.01 / pH 3.00 ± 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 = Flower/ Round Plate (MTP-(R)48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH-360.15 (pH Ser. 3305, gain 8)
Date of calibration	2020/11/03

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DO calibration parameters Lot No. 2010201 (BioLector® II/Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.10	70.09	70.07	70.06	70.05	70.04	70.02
ϕ cal100	42.23	42.04	41.86	41.68	41.49	41.31	41.13
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.01	70.00	69.99	69.98	69.96	69.95	69.94
ϕ cal100	40.94	40.76	40.58	40.39	40.21	40.03	39.84
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.93	69.91	69.90	69.89	69.88	69.86	69.85
ϕ cal100	39.66	39.47	39.29	39.11	38.92	38.74	38.56

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 (t ₉₀)	< 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-m2p-A 202850572 (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 = Flower/ Round Plate (MTP-(R)48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/11/03

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	815113
Date of sterilization	2020/10/15

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