

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

pH calibration parameters Lot No. 2007201 (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	68.77	68.71	68.65	68.59	68.53	68.48	68.42
φ max	10.22	10.18	10.14	10.10	10.06	10.02	9.99
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	6.17	6.17	6.16	6.15	6.14	6.13	6.13
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.36	68.30	68.24	68.18	68.13	68.07	68.01
φ max	9.95	9.91	9.87	9.83	9.79	9.75	9.71
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	6.12	6.11	6.10	6.10	6.09	6.08	6.07
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.95	67.89	67.83	67.78	67.72	67.66	67.60
φ max	9.67	9.63	9.59	9.55	9.51	9.47	9.43
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	6.07	6.06	6.05	6.04	6.04	6.03	6.02

pH sensor properties

Dynamic range	pH 3.70 – 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.35 – 4.75; ± 0.1 pH at pH 4.75 – 7.05; ± 0.25 pH at pH 7.05 – 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 (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 Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.15 (pH Ser. 3305, gain 8)
Date of calibration	2020/08/07

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DO calibration parameters Lot No. 2007201 (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	70.63	70.62	70.61	70.60	70.59	70.58	70.58
ϕ cal100	42.52	42.36	42.21	42.06	41.90	41.75	41.60
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.57	70.56	70.55	70.54	70.53	70.53	70.52
ϕ cal100	41.44	41.29	41.14	40.98	40.83	40.68	40.53
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.51	70.50	70.49	70.48	70.48	70.47	70.46
ϕ cal100	40.37	40.22	40.07	39.91	39.76	39.61	39.45

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 200950183 (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 Plate (MTP-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	2020/08/07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	787233
Date of sterilization	2020/07/30

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