

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

pH calibration parameters Lot No. 2007211 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.85	67.80	67.76	67.71	67.66	67.62	67.57
ϕ max	10.16	10.12	10.08	10.04	10.00	9.96	9.92
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	6.14	6.13	6.12	6.11	6.11	6.10	6.09
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.53	67.48	67.43	67.39	67.34	67.29	67.25
ϕ max	9.88	9.84	9.80	9.77	9.73	9.69	9.65
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	6.08	6.08	6.07	6.06	6.05	6.04	6.04
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.20	67.16	67.11	67.06	67.02	66.97	66.92
ϕ max	9.61	9.57	9.53	9.49	9.45	9.41	9.37
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	6.03	6.02	6.01	6.01	6.00	5.99	5.98

pH sensor properties

Dynamic range	pH 3.80 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.75; ± 0.1 pH at pH 4.75 - 7.00; ± 0.25 pH at pH 7.00 - 7.40 (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 = Microfluidic Flower (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.15 (pH Ser. 3305, gain 8)
Date of calibration	2020/08/12

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DO calibration parameters Lot No. 2007211 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	71.16	71.15	71.13	71.12	71.11	71.10	71.09
φ cal100	42.81	42.66	42.51	42.36	42.21	42.06	41.90
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.07	71.06	71.05	71.04	71.03	71.02	71.00
φ cal100	41.75	41.60	41.45	41.30	41.15	40.99	40.84
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.99	70.98	70.97	70.96	70.95	70.93	70.92
φ cal100	40.69	40.54	40.39	40.24	40.08	39.93	39.78

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-m2p-A 200950182 (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 Flower (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/08/12

Sterilization procedure

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

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