

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

pH calibration parameters Lot No. 2001221 (BioLector® Pro, filter module ID-221/421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.66	67.56	67.46	67.36	67.26	67.16	67.07
ϕ max	9.35	9.29	9.23	9.16	9.10	9.04	8.97
dpH	0.65	0.65	0.65	0.65	0.65	0.66	0.66
pH ₀	5.97	5.96	5.95	5.94	5.94	5.93	5.92
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	66.97	66.87	66.77	66.67	66.57	66.47	66.38
ϕ max	8.91	8.85	8.79	8.72	8.66	8.60	8.53
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH ₀	5.91	5.90	5.89	5.89	5.88	5.87	5.86
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.28	66.18	66.08	65.98	65.88	65.78	65.68
ϕ max	8.47	8.41	8.34	8.28	8.22	8.16	8.09
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH ₀	5.85	5.84	5.84	5.83	5.82	5.81	5.80

pH sensor properties

Dynamic range	pH 3.65 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.65; ± 0.1 pH at pH 4.65 - 6.85; ± 0.25 pH at pH 6.85 - 7.25 (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 FlowerPlate (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.35 (pH Ser.3188-RD, gain 8)
Date of calibration	2020/03/24

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DO calibration parameters Lot No. 2001221 (BioLector® Pro, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	69.33	69.31	69.29	69.27	69.25	69.23	69.21
ϕ cal100	40.73	40.55	40.37	40.18	40.00	39.82	39.63
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	69.19	69.17	69.15	69.13	69.11	69.09	69.07
ϕ cal100	39.45	39.26	39.08	38.9	38.71	38.53	38.35
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.05	69.03	69.01	68.99	68.97	68.95	68.93
ϕ cal100	38.16	37.98	37.80	37.61	37.43	37.25	37.06

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 192050140 (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 FlowerPlate (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.67 (DO Ser.4170-RD, gain 4)
Date of calibration	2020/03/24

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	739808
Date of sterilization	2020/03/12

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