

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

pH calibration parameters Lot No. 2011221 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.78	68.68	68.59	68.49	68.39	68.30	68.20
φ max	14.85	14.76	14.66	14.57	14.48	14.39	14.30
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.68	6.67	6.66	6.66	6.65	6.64	6.63
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.10	68.00	67.91	67.81	67.71	67.62	67.52
φ max	14.21	14.12	14.03	13.93	13.84	13.75	13.66
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.63	6.62	6.61	6.60	6.59	6.59	6.58
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.42	67.32	67.23	67.13	67.03	66.94	66.84
φ max	13.57	13.48	13.39	13.29	13.20	13.11	13.02
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.57	6.56	6.56	6.55	6.54	6.53	6.53

pH sensor properties

Dynamic range	pH 4.0-8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH; 4.75-8.65 ± 0.1 pH at pH 5.25-7.45 ± 0.25 pH at pH 7.45-7.95 (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 LG1-1939-01_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 = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.149994 (pH Ser 3305, gain 8)
Date of calibration	2021/01/08

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DO calibration parameters Lot No. 2011221(BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	69.17	69.17	69.16	69.15	69.15	69.14	69.14
φ cal100	41.55	41.36	41.17	40.97	40.78	40.59	40.40
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.13	69.13	69.12	69.12	69.11	69.11	69.10
φ cal100	40.21	40.02	39.83	39.64	39.44	39.25	39.06
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.10	69.09	69.08	69.08	69.07	69.07	69.06
φ cal100	38.87	38.68	38.49	38.30	38.11	37.92	37.72

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 202850573 (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 Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.440002 (DO Ser 4302-RD, gain 4)
Date of calibration	2021/01/08

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	829776
Date of sterilization	2020/11/23

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