

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

pH calibration parameters Lot No. 2011211 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.30	69.21	69.12	69.03	68.94	68.85	68.76
φ max	13.91	13.83	13.75	13.66	13.58	13.49	13.41
dpH	0.78	0.78	0.78	0.78	0.78	0.78	0.78
pH ₀	6.67	6.66	6.65	6.64	6.63	6.62	6.61
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.67	68.57	68.48	68.39	68.30	68.21	68.12
φ max	13.33	13.24	13.16	13.07	12.99	12.91	12.82
dpH	0.78	0.78	0.78	0.78	0.77	0.77	0.77
pH ₀	6.61	6.60	6.59	6.58	6.57	6.56	6.55
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.03	67.94	67.85	67.76	67.67	67.58	67.48
φ max	12.74	12.65	12.57	12.49	12.40	12.32	12.23
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.54	6.53	6.52	6.51	6.50	6.49	6.48

pH sensor properties

Dynamic range	pH 3.95-8.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.7-5.15; ± 0.1 pH at pH 5.15-7.45; ± 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-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.14 (pH Ser.3305, gain 8)
Date of calibration	2020/12/07

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DO calibration parameters Lot No. 2011211 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.83	70,81	70.79	70.76	70.74	70.72	70.70
φ cal100	42.83	42.63	42.43	42.23	42.03	41.83	41.63
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.68	70.66	70.64	70.62	70.60	70.57	70.55
φ cal100	41.43	41.23	41.03	40.83	40.63	40.43	40.23
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.53	70.51	70.49	70.47	70.45	70.43	70.41
φ cal100	40.03	39.83	39.63	39.44	39.24	39.04	38.84

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-11/2020 (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-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	2020/12/07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	829779
Date of sterilization	2020/11/23

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