

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

pH calibration parameters Lot No. 1927 (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	64.80	64.77	64.73	64.70	64.66	64.63	64.59
ϕ max	6.57	6.59	6.61	6.63	6.65	6.67	6.69
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.69
pH ₀	5.78	5.78	5.77	5.77	5.76	5.76	5.75
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.56	64.52	64.49	64.45	64.42	64.38	64.35
ϕ max	6.71	6.73	6.75	6.77	6.79	6.81	6.83
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.68
pH ₀	5.75	5.74	5.73	5.73	5.72	5.72	5.71
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	64.31	64.28	64.25	64.21	64.18	64.14	64.11
ϕ max	6.85	6.87	6.89	6.91	6.93	6.95	6.97
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.67
pH ₀	5.71	5.70	5.70	5.69	5.68	5.68	5.67

pH sensor properties

Dynamic range	pH 3.20 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90 - 4.30; ± 0.1 pH at pH 4.30 - 6.75; ± 0.25 pH at pH 6.75 - 7.15 (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 LG1-1816-01 (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 1.00 ± 0.01 / pH 2.00 ± 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-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser.3188-RD, gain 8)
Date of calibration	2019/05/20

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DO calibration parameters Lot No. 1927 (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	68.24	68.22	68.21	68.19	68.18	68.17	68.15
φ cal100	42.18	42.06	41.94	41.82	41.70	41.58	41.46
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	68.14	68.12	68.11	68.10	68.08	68.07	68.05
φ cal100	41.33	41.21	41.09	40.97	40.85	40.73	40.61
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	68.04	68.02	68.01	68.00	67.98	67.97	67.95
φ cal100	40.49	40.37	40.25	40.12	40.00	39.88	39.76

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-12/2018 (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-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/05/20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	625276
Date of sterilization	2019/05/07

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