

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

pH calibration parameters Lot No. 1812 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.17	68.04	67.91	67.79	67.66	67.53	67.40
φ max	11.77	11.69	11.60	11.52	11.44	11.36	11.27
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH ₀	6.35	6.34	6.33	6.33	6.32	6.31	6.30
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.27	67.14	67.02	66.89	66.76	66.63	66.50
φ max	11.19	11.11	11.03	10.94	10.86	10.78	10.70
dpH	0.76	0.76	0.75	0.75	0.75	0.75	0.75
pH ₀	6.29	6.28	6.27	6.26	6.26	6.25	6.24
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	66.37	66.25	66.12	65.99	65.86	65.73	65.60
φ max	10.61	10.53	10.45	10.37	10.28	10.20	10.12
dpH	0.75	0.75	0.75	0.75	0.75	0.75	0.75
pH ₀	6.23	6.22	6.21	6.20	6.19	6.19	6.18

pH sensor properties

Dynamic range	pH 2.45 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.40 - 5.05; ± 0.1 pH at pH 5.05 - 6.45; ± 0.25 pH at pH 6.45 - 8.10 (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 LG1-1737-01 (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 3.00 ± 0.01 / pH 4.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM 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-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.78 (pH Ser.3188-RD, gain 8)
Date of calibration	2018/04/24

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DO calibration parameters Lot No. 1812 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.55	68.52	68.49	68.46	68.43	68.40	68.37
ϕ cal100	44.36	44.13	43.90	43.68	43.45	43.22	42.99
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.34	68.32	68.29	68.26	68.23	68.20	68.17
ϕ cal100	42.76	42.53	42.30	42.07	41.84	41.61	41.38
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.14	68.11	68.08	68.05	68.02	67.99	67.97
ϕ cal100	41.15	40.92	40.70	40.47	40.24	40.01	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-01/2017 (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-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.52(DO Ser.4170-RD, gain 4)
Date of calibration	2018/04/24

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	490804
Date of sterilization	2018/04/16

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