

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

pH calibration parameters Lot No. 1832 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.63	69.52	69.40	69.29	69.18	69.07	68.96
ϕ max	12.70	12.60	12.50	12.40	12.31	12.21	12.11
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.74
pH ₀	6.27	6.26	6.25	6.24	6.24	6.23	6.22
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.85	68.74	68.63	68.52	68.41	68.30	68.19
ϕ max	12.01	11.91	11.81	11.71	11.62	11.52	11.42
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.74
pH ₀	6.22	6.21	6.20	6.19	6.19	6.18	6.17
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	68.08	67.97	67.86	67.75	67.63	67.52	67.41
ϕ max	11.32	11.22	11.12	11.03	10.93	10.83	10.73
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.74
pH ₀	6.16	6.16	6.15	6.14	6.13	6.13	6.12

pH sensor properties

Dynamic range	pH 2.40 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.30 - 4.70; ± 0.1 pH at pH 4.70 - 6.80; ± 0.25 pH at pH 6.80 - 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 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 = FlowerPlate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser.3188-RD, gain 8)
Date of calibration	2018/09/07

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DO calibration parameters Lot No. 1832 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.29	68.27	68.25	68.23	68.21	68.19	68.17
ϕ cal100	43.31	43.11	42.91	42.70	42.50	42.30	42.10
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.15	68.13	68.11	68.09	68.07	68.05	68.03
ϕ cal100	41.90	41.69	41.49	41.29	41.09	40.89	40.68
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.01	67.99	67.97	67.95	67.93	67.91	67.89
ϕ cal100	40.48	40.28	40.08	39.88	39.67	39.47	39.27

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 Redflash-03/2018 (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 = FlowerPlate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2018/09/07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	535493
Date of sterilization	2018/08/17

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