

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

pH calibration parameters Lot No. 1829 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.03	68.93	68.84	68.74	68.64	68.55	68.45
ϕ max	13.03	12.94	12.85	12.77	12.68	12.59	12.50
dpH	0.75	0.75	0.74	0.74	0.74	0.74	0.74
pH ₀	6.36	6.35	6.34	6.33	6.33	6.32	6.31
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.36	68.26	68.16	68.07	67.97	67.87	67.78
ϕ max	12.41	12.33	12.24	12.15	12.06	11.97	11.88
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.74
pH ₀	6.30	6.29	6.29	6.28	6.27	6.26	6.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.68	67.58	67.49	67.39	67.29	67.20	67.10
ϕ max	11.80	11.71	11.62	11.53	11.44	11.35	11.27
dpH	0.74	0.74	0.73	0.73	0.73	0.73	0.73
pH ₀	6.25	6.24	6.23	6.22	6.22	6.21	6.20

pH sensor properties

Dynamic range	pH 2.45 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.45 - 5.20; ± 0.1 pH at pH 5.20 - 6.55; ± 0.25 pH at pH 6.55 - 8.15 (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 LG1-1737-01 (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	2018/08/22

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DO calibration parameters Lot No. 1829 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.81	68.79	68.77	68.75	68.73	68.71	68.68
ϕ cal100	44.86	44.66	44.46	44.26	44.06	43.86	43.66
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.66	68.64	68.62	68.60	68.58	68.55	68.53
ϕ cal100	43.46	43.26	43.06	42.86	42.66	42.46	42.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.51	68.49	68.47	68.45	68.42	68.40	68.38
ϕ cal100	42.06	41.85	41.65	41.45	41.25	41.05	40.85

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-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 = 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	2018/08/22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	530657
Date of sterilization	2018/08/03

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