

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

pH calibration parameters Lot No. 1853 (BioLector® II/Pro. filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	65.20	65.17	65.13	65.10	65.07	65.03	65.00
φ max	6.46	6.45	6.43	6.41	6.39	6.38	6.36
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	5.77	5.77	5.76	5.76	5.75	5.75	5.75
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	64.96	64.93	64.89	64.86	64.82	64.79	64.75
φ max	6.49	6.32	6.31	6.29	6.27	6.25	6.24
dpH	0.72	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.74	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	64.72	64.68	64.65	64.61	64.58	64.54	64.51
φ max	6.22	6.20	6.18	6.17	6.15	6.13	6.12
dpH	0.71	0.71	0.71	0.70	0.70	0.70	0.70
pH ₀	5.71	5.70	5.70	5.69	5.69	5.68	5.68

pH sensor properties

Dynamic range	pH 2.20 - 8.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 2.95 - 4.15; ± 0.1 pH at pH 4.15 – 6.65; ± 0.25 pH at pH 6.65 - 7.70 (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-v1-1816-01 (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 FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser.3188-RD. gain 8)
Date of calibration	2019/01/02

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DO calibration parameters Lot No. 1853 (BioLector® II/Pro. filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.06	68.04	68.02	68.01	67.99	67.97	67.95
ϕ cal100	42.59	42.45	42.32	42.19	42.06	41.93	41.79
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	67.93	67.91	67.90	67.88	67.86	67.84	67.82
ϕ cal	41.66	41.53	41.40	41.27	41.13	41.00	40.87
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ ca	67.81	67.79	67.77	67.75	67.73	67.71	67.70
ϕ cal100	40.74	40.61	40.48	40.34	40.21	40.08	39.95

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-07/2018 (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 FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/01/02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	575211
Date of sterilization	2018/12/13

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