

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

pH calibration parameters Lot No. 1825 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.38	68.28	68.18	68.07	67.97	67.86	67.76
ϕ max	12.38	12.29	12.20	12.11	12.03	11.94	11.85
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	6.27	6.26	6.26	6.25	6.24	6.24	6.23
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.65	67.55	67.45	67.34	67.24	67.13	67.03
ϕ max	11.76	11.67	11.58	11.49	11.40	11.31	11.22
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	6.22	6.22	6.21	6.20	6.20	6.19	6.18
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.93	66.82	66.72	66.61	66.51	66.41	66.30
ϕ max	11.13	11.05	10.96	10.87	10.78	10.69	10.60
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	6.18	6.17	6.16	6.16	6.15	6.15	6.14

pH sensor properties

Dynamic range	pH 2.45 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.35 - 4.90; ± 0.1 pH at pH 4.90 – 6.60; ± 0.25 pH at pH 6.60 - 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 = 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	2018/07/19

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

DO calibration parameters Lot No. 1825 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	67.75	67.72	67.70	67.68	67.65	67.63	67.61
φ cal100	43.37	43.17	42.96	42.76	42.56	42.36	42.16
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	67.58	67.56	67.54	67.51	67.49	67.46	67.44
φ cal100	41.96	41.75	41.55	41.35	41.15	40.95	40.74
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	67.42	67.39	67.37	67.35	67.32	67.30	67.28
φ cal100	40.54	40.34	40.14	39.94	39.74	39.53	39.33

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 = 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	2018/07/19

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	518342
Date of sterilization	2018/07/01

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