

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

pH calibration parameters Lot No. 1710 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	66.41	66.17	65.92	65.68	65.43	65.19	64.94
ϕ max	8.33	8.27	8.20	8.14	8.07	8.01	7.94
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH ₀	6.00	5.99	5.98	5.97	5.96	5.95	5.94
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.70	64.45	64.21	63.96	63.72	63.47	63.23
ϕ max	7.88	7.81	7.74	7.68	7.61	7.55	7.48
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH ₀	5.93	5.92	5.91	5.90	5.89	5.88	5.87
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.98	62.74	62.49	62.25	62.00	61.76	61.51
ϕ max	7.42	7.35	7.29	7.22	7.16	7.09	7.03
dpH	0.66	0.66	0.67	0.67	0.67	0.67	0.67
pH ₀	5.86	5.85	5.84	5.83	5.82	5.81	5.80

pH sensor properties

Dynamic range	pH 3.20 - 8.30
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.60 - 4.15; ± 0.1 pH at pH 4.15 - 7.25; ± 0.25 pH at pH 7.25 - 7.85 (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 LG1-1629 (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.3167-RD, gain 8)
Date of calibration	2017/06/20

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DO calibration parameters Lot No. 1710 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	67.94	67.93	67.91	67.90	67.89	67.88	67.86
φ cal100	42.59	42.41	42.23	42.05	41.87	41.70	41.52
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	67.85	67.84	67.82	67.81	67.80	67.78	67.77
φ cal100	41.34	41.16	40.98	40.80	40.62	40.44	40.27
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	67.76	67.74	67.73	67.72	67.71	67.69	67.68
φ cal100	40.09	39.91	39.73	39.55	39.37	39.19	39.02

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-1602 (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	2017/06/20

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	380035
Date of sterilization	2017/06/13

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