

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

pH calibration parameters Lot No. 1822 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.09	67.99	67.89	67.79	67.69	67.59	67.49
ϕ max	13.89	13.79	13.69	13.59	13.48	13.38	13.28
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	6.41	6.40	6.39	6.38	6.37	6.36	6.36
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.39	67.29	67.19	67.09	66.99	66.89	66.79
ϕ max	13.18	13.08	12.97	12.87	12.77	12.67	12.57
dpH	0.77	0.77	0.77	0.77	0.76	0.76	0.76
pH ₀	6.35	6.34	6.33	6.32	6.31	6.31	6.30
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.69	66.59	66.49	66.39	66.29	66.19	66.09
ϕ max	12.46	12.36	12.26	12.16	12.05	11.95	11.85
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH ₀	6.29	6.28	6.27	6.26	6.26	6.25	6.24

pH sensor properties

Dynamic range	pH 2.50 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.50 - 5.65; ± 0.1 pH at pH 5.65 - 6.25; ± 0.25 pH at pH 6.25 - 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 = 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	2018/07/11

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DO calibration parameters Lot No. 1822 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.42	68.39	68.37	68.35	68.32	68.30	68.28
ϕ cal100	44.98	44.75	44.52	44.28	44.05	43.82	43.59
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.25	68.23	68.21	68.18	68.16	68.14	68.11
ϕ cal100	43.36	43.13	42.90	42.67	42.43	42.20	41.97
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.09	68.07	68.04	68.02	68.00	67.97	67.95
ϕ cal100	41.74	41.51	41.28	41.05	40.82	40.58	40.35

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-01/2017 (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	2018/07/11

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	518330
Date of sterilization	2018/07/01

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