

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

pH calibration parameters Lot No. 1707 PROTOTYPE (BioLector® II/Pro)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	48.53	48.47	48.40	48.34	48.27	48.20	48.14
ϕ max	15.88	15.88	15.88	15.87	15.87	15.87	15.87
dpH	0.60	0.60	0.60	0.60	0.59	0.59	0.59
pH ₀	4.20	4.19	4.18	4.17	4.17	4.16	4.15
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	48.07	48.01	47.94	47.88	47.81	47.74	47.68
ϕ max	15.86	15.86	15.86	15.86	15.85	15.85	15.85
dpH	0.59	0.59	0.59	0.59	0.59	0.59	0.59
pH ₀	4.14	4.13	4.12	4.11	4.10	4.09	4.08
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	47.61	47.55	47.48	47.41	47.35	47.28	47.22
ϕ max	15.84	15.84	15.84	15.84	15.83	15.83	15.83
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	4.07	4.06	4.05	4.04	4.03	4.02	4.01

pH sensor properties

Dynamic range	pH 2.00 - 5.75
Resolution	Up to 0.02 pH (software)
Accuracy	± 0.3 pH at pH 2.15 - 2.60; ± 0.15 pH at pH 2.60– 5.15; ± 0.3 pH at pH 5.15 – 5.60 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 5.0	-0.03 pH per day (sampling interval of 15 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 low-pH-10-1352-01 (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 ± 0.01 / pH 7.00 ± 0.01 / pH 8.00 ± 0.01, 20 °C); 150 mM Citrate-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0033
Calibration phase offset	pH -1.83(pH Ser.3144-RD, gain 7)
Date of calibration	2017/03/30

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DO calibration parameters Lot No. 1707 PROTOTYPE (BioLector® II/Pro)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.54	72.49	72.43	72.38	72.32	72.26	72.21
φ cal100	43.63	43.40	43.16	42.92	42.69	42.45	42.22
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.15	72.10	72.04	71.99	71.93	71.87	71.82
φ cal100	41.98	41.75	41.51	41.27	41.04	40.80	40.57
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.76	71.71	71.65	71.60	71.54	71.49	71.43
φ cal100	40.33	40.10	39.86	39.62	39.39	39.15	38.92

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % O ₂ (software)
Precision (CV)	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.03% O ₂ within 30 days (sampling interval of 1 min)
Response time (t90)	< 30 s
Temperature range	0 – 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 PSt3-HG-1426-03_3 (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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0033
Calibration phase offset	DO -360.85 (DO Ser.4154-RD, gain 7)
Date of calibration	2017/03/30

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	353634
Date of sterilization	2017/03/26

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