

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

pH calibration parameters Lot No. 2010102 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.92	63.85	63.79	63.72	63.66	63.60	63.53
ϕ max	13.64	13.64	13.65	13.66	13.66	13.67	13.68
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.34	6.33	6.33	6.32	6.31	6.30	6.29
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	63.47	63.40	63.34	63.27	63.21	63.14	63.08
ϕ max	13.68	13.69	13.70	13.70	13.71	13.72	13.72
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.29	6.28	6.27	6.26	6.25	6.25	6.24
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.02	62.95	62.89	62.82	62.76	62.69	62.63
ϕ max	13.73	13.73	13.74	13.75	13.75	13.76	13.77
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.23	6.22	6.21	6.20	6.20	6.19	6.18

pH sensor properties

Dynamic range	pH 4.35-7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.85 - 5.15; ± 0.1 pH at pH 5.15 – 7.05; ± 0.25 pH at pH 7.05 - 7.35 (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 HP8-1811-01_3 (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 Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Plate (MTP-R48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2020/10/21

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DO calibration parameters Lot No. 2010102 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.88	72.84	72.80	72.75	72.71	72.67	72.62
ϕ cal100	44.60	44.38	44.15	43.93	43.71	43.48	43.26
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.58	72.54	72.50	72.45	72.41	72.37	72.32
ϕ cal100	43.03	42.81	42.59	42.36	42.14	41.92	41.69
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.28	72.24	72.20	72.15	72.11	72.07	72.03
ϕ cal100	41.47	41.25	41.02	40.80	40.58	40.35	40.13

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 (t ₉₀)	< 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 Pst3-HG-1810-01_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 = HP8-Pst3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Plate (MTP-R48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.26 (DO Ser.4103, gain 7)
Date of calibration	2020/10/21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	815113
Date of sterilization	2020/10/15

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