

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

pH calibration parameters Lot No. 2010101 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.28	64.22	64.16	64.10	64.04	63.98	63.92
φ max	13.35	13.36	13.37	13.38	13.38	13.39	13.40
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.28	6.28	6.27	6.26	6.26	6.25	6.25
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.86	63.80	63.74	63.68	63.62	63.56	63.50
φ max	13.41	13.42	13.43	13.44	13.44	13.45	13.46
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.24	6.23	6.23	6.22	6.22	6.21	6.20
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.44	63.38	63.32	63.26	63.20	63.14	63.08
φ max	13.47	13.48	13.49	13.49	13.50	13.51	13.52
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.20	6.19	6.19	6.18	6.17	6.17	6.16

pH sensor properties

Dynamic range	pH 4.25 – 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 – 5.05; ± 0.1 pH at pH 5.05 – 7.05; ± 0.25 pH at pH 7.05 – 7.40 (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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2020/10/27

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DO calibration parameters Lot No. 2010101 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.77	72.72	72.67	72.62	72.57	72.52	72.47
ϕ cal100	44.85	44.62	44.40	44.18	43.95	43.73	43.51
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.42	72.37	72.32	72.27	72.22	72.17	72.12
ϕ cal100	43.28	43.06	42.84	42.61	42.39	42.17	41.94
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.07	72.02	71.97	71.92	71.87	71.82	71.77
ϕ cal100	41.72	41.50	41.27	41.05	40.83	40.60	40.38

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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.26 (DO Ser. 4103, gain 7)
Date of calibration	2020/10/27

Sterilization procedure

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

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