

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

pH calibration parameters Lot No.2106101 (BioLector® II/Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.00	63.93	63.86	63.79	63.72	63.66	63.59
φ max	13.41	13.40	13.40	13.39	13.39	13.38	13.38
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.19	6.18	6.17	6.17	6.16	6.15	6.15

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.52	63.45	63.38	63.31	63.24	63.17	63.11
φ max	13.37	13.37	13.36	13.36	13.35	13.35	13.34
dpH	0.56	0.56	0.57	0.57	0.57	0.57	0.57
pH ₀	6.14	6.13	6.13	6.12	6.12	6.11	6.10

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.04	62.97	62.90	62.83	62.76	62.69	62.62
φ max	13.33	13.33	13.32	13.32	13.31	13.31	13.30
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.10	6.09	6.08	6.08	6.07	6.07	6.06

pH sensor properties

Dynamic range	pH 4.15 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65-4.95; ± 0.1 pH at pH 4.95-6.95; ± 0.25 pH at pH 6.95-7.30 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 0,00 (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 = 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	2021-06-02

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DO calibration parameters Lot No.2106101 (BioLector® II/Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	73.14	73.09	73.03	72.98	72.93	72.87	72.82
ϕ cal100	43.69	43.49	43.30	43.10	42.90	42.70	42.50

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.77	72.71	72.66	72.61	72.55	72.50	72.45
ϕ cal100	42.31	42.11	41.91	41.71	41.51	41.32	41.12

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.39	72.34	72.29	72.23	72.18	72.12	72.07
ϕ cal100	40.92	40.72	40.52	40.33	40.13	39.93	39.73

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	2021-06-02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	867189
Date of sterilization	2021-05-26

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