

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

pH calibration parameters Lot No. 2003101 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.93	63.88	63.82	63.77	63.72	63.67	63.61
φ max	14.20	14.19	14.19	14.18	14.17	14.17	14.16
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.42	6.41	6.40	6.39	6.38	6.37	6.36
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.56	63.51	63.46	63.40	63.35	63.30	63.25
φ max	14.15	14.14	14.14	14.13	14.12	14.12	14.11
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.35	6.34	6.33	6.32	6.31	6.30	6.29
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.19	63.14	63.09	63.04	62.98	62.93	62.88
φ max	14.10	14.10	14.09	14.08	14.08	14.07	14.06
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.28	6.27	6.26	6.25	6.24	6.23	6.22

pH sensor properties

Dynamic range	pH 4.50 – 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.00 – 5.25; ± 0.1 pH at pH 5.25 – 7.10; ± 0.25 pH at pH 7.10 – 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_2 (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 -1.53 (pH Ser. 3111, gain 7)
Date of calibration	2020/06/22

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DO calibration parameters Lot No. 2003101 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.90	72.86	72.82	72.79	72.75	72.71	72.67
ϕ cal100	44.32	44.13	43.94	43.75	43.56	43.37	43.18
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.63	72.59	72.55	72.51	72.47	72.43	72.39
ϕ cal100	43.00	42.81	42.62	42.43	42.24	42.05	41.87
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.35	72.32	72.28	72.24	72.20	72.16	72.12
ϕ cal100	41.68	41.49	41.30	41.11	40.92	40.73	40.55

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_2 (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 -360.32 (DO Ser. 4103, gain 7)
Date of calibration	2020/06/22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	738725
Date of sterilization	2020/03/10

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