

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

pH calibration parameters Lot No. 2009101 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.79	63.73	63.67	63.62	63.56	63.50	63.45
φ max	13.71	13.73	13.74	13.75	13.76	13.77	13.78
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.37	6.36	6.36	6.35	6.34	6.33	6.32
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.39	63.33	63.27	63.22	63.16	63.10	63.05
φ max	13.79	13.80	13.81	13.82	13.83	13.84	13.85
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.31	6.30	6.29	6.29	6.28	6.27	6.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.99	62.93	62.88	62.82	62.76	62.71	62.65
φ max	13.87	13.88	13.89	13.90	13.91	13.92	13.93
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.25	6.24	6.23	6.22	6.21	6.21	6.20

pH sensor properties

Dynamic range	pH 4.35 – 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.85 - 5.15; ± 0.1 pH at pH 5.15 – 7.10; ± 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_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	2020/09/25

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DO calibration parameters Lot No. 2009101 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.60	72.57	72.53	72.50	72.46	72.43	72.39
ϕ cal100	44.88	44.66	44.44	44.22	44.01	43.79	43.57
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.36	72.33	72.29	72.26	72.22	72.19	72.15
ϕ cal100	43.35	43.14	42.92	42.70	42.48	42.27	42.05
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.12	72.08	72.05	72.01	71.98	71.94	71.91
ϕ cal100	41.83	41.62	41.40	41.18	40.96	40.75	40.53

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 -360.26 (DO Ser.4103, gain 7)
Date of calibration	2020/09/25

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	803678
Date of sterilization	2020/09/16

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