

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

pH calibration parameters Lot No. 1841 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.21	63.15	63.08	63.01	62.95	62.88	62.81
ϕ max	12.64	12.64	12.63	12.63	12.62	12.62	12.61
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.54
pH ₀	6.19	6.18	6.18	6.17	6.17	6.16	6.16
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.75	62.68	62.61	62.55	62.48	62.41	62.35
ϕ max	12.61	12.60	12.60	12.59	12.59	12.58	12.58
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.15	6.14	6.14	6.13	6.13	6.12	6.11
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.28	62.21	62.15	62.08	62.01	61.94	61.88
ϕ max	12.57	12.57	12.56	12.56	12.55	12.55	12.54
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.11	6.10	6.10	6.09	6.09	6.08	6.07

pH sensor properties

Dynamic range	pH 3.60 - 8.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00 - 4.55; ± 0.1 pH at pH 4.55 - 7.40; ± 0.25 pH at pH 7.40 - 7.95 (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 HP8-1803-01 (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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -1.40 (pH Ser.3111, gain 7)
Date of calibration	2018/10/15

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DO calibration parameters Lot No. 1841 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.00	71.94	71.88	71.83	71.77	71.71	71.66
ϕ cal100	43.89	43.70	43.50	43.31	43.12	42.93	42.74
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.60	71.54	71.49	71.43	71.37	71.32	71.26
ϕ cal100	42.55	42.36	42.17	41.98	41.79	41.60	41.40
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.20	71.15	71.09	71.03	70.98	70.92	70.86
ϕ cal100	41.21	41.02	40.83	40.64	40.45	40.26	40.07

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 (t90)	< 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-1742-02 (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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.25 (DO Ser.4103-hc, gain 7)
Date of calibration	2018/10/15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	551699
Date of sterilization	2018/10/08

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