

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

pH calibration parameters Lot No. 1846 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.75	63.71	63.67	63.63	63.60	63.56	63.52
φ max	12.70	12.70	12.69	12.69	12.69	12.68	12.68
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.11	6.10	6.10	6.10	6.09	6.09	6.09
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.48	63.44	63.40	63.36	63.32	63.29	63.25
φ max	12.67	12.67	12.66	12.66	12.65	12.65	12.65
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.08	6.08	6.08	6.08	6.07	6.07	6.07
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.21	63.17	63.13	63.09	63.05	63.02	62.98
φ max	12.64	12.64	12.63	12.63	12.62	12.62	12.61
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.53
pH ₀	6.06	6.06	6.06	6.05	6.05	6.05	6.04

pH sensor properties

Dynamic range	pH 3.55 - 8.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95 - 4.45; ± 0.1 pH at pH 4.45 - 7.45; ± 0.25 pH at pH 7.45 - 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 HP8-1811-01 (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	2018/11/16

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DO calibration parameters Lot No. 1846 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	71.89	71.86	71.83	71.80	71.77	71.74	71.70
φ cal100	42.57	42.47	42.37	42.27	42.17	42.07	41.97
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.67	71.64	71.61	71.58	71.55	71.52	71.49
φ cal100	41.87	41.77	41.66	41.56	41.46	41.36	41.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.46	71.43	71.40	71.36	71.33	71.30	71.27
φ cal100	41.16	41.06	40.96	40.86	40.76	40.66	40.56

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	2018/11/16

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	563808
Date of sterilization	2018/11/12

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