

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

pH calibration parameters Lot No. 1831 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.67	63.59	63.52	63.44	63.36	63.29	63.21
ϕ max	12.40	12.39	12.39	12.38	12.38	12.38	12.37
dpH	0.51	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.29	6.29	6.28	6.28	6.27	6.27	6.26
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	63.14	63.06	62.98	62.91	62.83	62.76	62.68
ϕ max	12.37	12.36	12.36	12.35	12.35	12.34	12.34
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.26	6.25	6.24	6.24	6.23	6.23	6.22
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.60	62.53	62.45	62.38	62.30	62.22	62.15
ϕ max	12.34	12.33	12.33	12.32	12.32	12.31	12.31
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.22	6.21	6.21	6.20	6.20	6.19	6.18

pH sensor properties

Dynamic range	pH 3.70 - 8.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.10 - 4.60; ± 0.1 pH at pH 4.60 - 7.50; ± 0.25 pH at pH 7.50 - 8.00 (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	2018/09/04

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DO calibration parameters Lot No. 1831 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.78	71.73	71.68	71.63	71.58	71.54	71.49
ϕ cal100	44.44	44.26	44.08	43.90	43.72	43.53	43.35
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.44	71.39	71.34	71.29	71.24	71.19	71.14
ϕ cal100	43.17	42.99	42.81	42.63	42.45	42.27	42.09
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.09	71.04	70.99	70.94	70.89	70.84	70.79
ϕ cal100	41.91	41.72	41.54	41.36	41.18	41.00	40.82

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	2018/09/04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	535493
Date of sterilization	2018/08/17

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