

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

pH calibration parameters Lot No. 1806 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	64.70	64.62	64.54	64.47	64.39	64.31	64.24
ϕ max	16.46	16.45	16.45	16.44	16.44	16.43	16.43
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.36	6.35	6.35	6.34	6.33	6.32	6.32
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.16	64.08	64.01	63.93	63.85	63.78	63.70
ϕ max	16.42	16.41	16.41	16.40	16.40	16.39	16.39
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.31	6.30	6.29	6.28	6.28	6.27	6.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.62	63.55	63.47	63.39	63.32	63.24	63.16
ϕ max	16.38	16.37	16.37	16.36	16.36	16.35	16.35
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.25	6.25	6.24	6.23	6.22	6.21	6.21

pH sensor properties

Dynamic range	pH 3.75 - 8.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20 - 4.75; ± 0.1 pH at pH 4.75 – 7.40; ± 0.25 pH at pH 7.40 - 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 HP8-1427-02_4 (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 = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -1.180 (pH Ser.3111-RD, gain 7)
Date of calibration	2018/03/27

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DO calibration parameters Lot No. 1806 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.02	71.98	71.94	71.90	71.86	71.82	71.77
ϕ cal100	45.19	44.95	44.71	44.48	44.24	44.01	43.77
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.73	71.69	71.65	71.61	71.56	71.52	71.48
ϕ cal100	43.53	43.30	43.06	42.83	42.59	42.36	42.12
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.44	71.40	71.36	71.31	71.27	71.23	71.19
ϕ cal100	41.88	41.65	41.41	41.18	40.94	40.71	40.47

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-1426-03_3 (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 = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.59 (DO Ser.4103-RD, gain 7)
Date of calibration	2018/03/27

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	483330
Date of sterilization	2018/03/22

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