

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

pH calibration parameters Lot No. 1803 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.37	64.29	64.21	64.13	64.05	63.97	63.89
φ max	16.89	16.88	16.87	16.87	16.86	16.85	16.84
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.43	6.42	6.42	6.41	6.40	6.39	6.38
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.81	63.73	63.65	63.57	63.49	63.40	63.32
φ max	16.84	16.83	16.82	16.81	16.81	16.80	16.79
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.37	6.36	6.35	6.34	6.34	6.33	6.32
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.24	63.16	63.08	63.00	62.92	62.84	62.76
φ max	16.78	16.78	16.77	16.76	16.75	16.75	16.74
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.31	6.30	6.29	6.28	6.27	6.26	6.25

pH sensor properties

Dynamic range	pH 3.80 - 8.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.85; ± 0.1 pH at pH 4.85 - 7.45; ± 0.25 pH at pH 7.45 - 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 HP8-1427-04 (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	2018/02/21

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DO calibration parameters Lot No. 1803 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.84	71.80	71.75	71.71	71.67	71.63	71.59
ϕ cal100	44.33	44.09	43.84	43.59	43.34	43.10	42.85
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.55	71.50	71.46	71.42	71.38	71.34	71.30
ϕ cal100	42.60	42.36	42.11	41.86	41.61	41.37	41.12
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.25	71.21	71.17	71.13	71.09	71.05	71.00
ϕ cal100	40.87	40.62	40.38	40.13	39.88	39.63	39.39

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 (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	2018/02/21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	469217
Date of sterilization	2018/02/13

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