

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

pH calibration parameters Lot No. 1722 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	64.82	64.73	64.64	64.55	64.47	64.38	64.29
ϕ max	16.84	16.83	16.82	16.80	16.79	16.77	16.76
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.47	6.46	6.45	6.44	6.43	6.42	6.41
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.21	64.12	64.03	63.94	63.86	63.77	63.68
ϕ max	16.75	16.73	16.72	16.71	16.69	16.68	16.67
dpH	0.52	0.52	0.51	0.51	0.51	0.51	0.51
pH ₀	6.40	6.39	6.38	6.38	6.37	6.36	6.35
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.59	63.51	63.42	63.33	63.25	63.16	63.07
ϕ max	16.65	16.64	16.63	16.61	16.60	16.59	16.57
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.34	6.33	6.32	6.31	6.30	6.29	6.28

pH sensor properties

Dynamic range	pH 3.85 - 8.50
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 - 8.05 (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_3 (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 -1.180 (pH Ser.3111-RD, gain 7)
Date of calibration	2017/11/23

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DO calibration parameters Lot No. 1722 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.03	71.98	71.93	71.89	71.84	71.79	71.75
φ cal100	47.67	47.28	46.88	46.49	46.09	45.69	45.30
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.70	71.65	71.61	71.56	71.51	71.47	71.42
φ cal100	44.90	44.51	44.11	43.72	43.32	42.93	42.53
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.37	71.33	71.28	71.23	71.19	71.14	71.09
φ cal100	42.14	41.74	41.35	40.95	40.55	40.16	39.76

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 = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DDO -360.59 (DO Ser.4103-RD, gain 7)
Date of calibration	2017/11/23

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	437557
Date of sterilization	2017/11/17

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