

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

pH calibration parameters Lot No. 1911 (BioLector® II/Pro, filter module ID-202/402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.21	63.17	63.13	63.09	63.05	63.01	62.97
ϕ max	13.76	13.76	13.75	13.75	13.74	13.73	13.73
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.16	6.15	6.15	6.15	6.14	6.14	6.14
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.93	62.89	62.85	62.81	62.77	62.73	62.69
ϕ max	13.72	13.71	13.71	13.70	13.69	13.69	13.68
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.13	6.13	6.13	6.12	6.12	6.12	6.11
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.65	62.61	62.57	62.53	62.49	62.45	62.41
ϕ max	13.68	13.67	13.66	13.66	13.65	13.64	13.64
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.11	6.11	6.10	6.10	6.10	6.10	6.09

pH sensor properties

Dynamic range	pH 3.60 - 8.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00 - 4.55; ± 0.1 pH at pH 4.55 - 7.40; ± 0.25 pH at pH 7.40 - 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 = Microfluidic FlowerPlate (MTP-MF32-BOH1)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -1.40 (pH Ser.3111-hc. gain 7)
Date of calibration	2019/03/06

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DO calibration parameters Lot No. 1911 (BioLector® II/Pro, filter module ID-203/403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.95	70.92	70.89	70.86	70.83	70.79	70.76
ϕ cal100	43.16	43.05	42.95	42.85	42.75	42.65	42.55
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.73	70.70	70.67	70.63	70.60	70.57	70.54
ϕ cal100	42.44	42.34	42.24	42.14	42.04	41.93	41.83
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.50	70.47	70.44	70.41	70.38	70.34	70.31
ϕ cal100	41.73	41.63	41.53	41.43	41.32	41.22	41.12

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 = Microfluidic FlowerPlate (MTP-MF32-BOH1)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.25 (DO Ser.4103-hc. gain 7)
Date of calibration	2019/03/06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	598020
Date of sterilization	2019/02/21

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