

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

pH calibration parameters Lot No. 1840 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	76.41	76.43	76.45	76.47	76.49	76.51	76.53
ϕ max	30.80	30.88	30.95	31.03	31.11	31.19	31.26
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.14	5.14	5.13	5.13	5.13	5.12	5.12
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	76.55	76.57	76.59	76.60	76.62	76.64	76.66
ϕ max	31.34	31.42	31.50	31.57	31.65	31.73	31.81
dpH	-0.41	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40
pH ₀	5.11	5.11	5.11	5.10	5.10	5.10	5.09
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	76.68	76.70	76.72	76.74	76.76	76.78	76.80
ϕ max	31.89	31.96	32.04	32.12	32.20	32.27	32.35
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.09	5.09	5.08	5.08	5.08	5.07	5.07

pH sensor properties

Dynamic range	pH 3.50 - 6.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.85 - 4.05; ± 0.1 pH at pH 4.05 - 5.80; ± 0.25 pH at pH 5.80 - 6.00 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 5	< 0.003 pH per day (sampling interval of 6 min)
Temperature range	15 °C to 40 °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);
Basic material	pH sensor pH51-184520006 (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 1.00 ± 0.01 / pH 2.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360,68 (pH Ser.prototype, gain 6)
Date of calibration	2018/09/21

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DO calibration parameters Lot No. 1840 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	67.62	67.61	67.60	67.58	67.57	67.55	67.54
ϕ cal100	42.17	41.98	41.80	41.61	41.42	41.24	41.05
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	67.53	67.51	67.50	67.48	67.47	67.45	67.44
ϕ cal100	40.86	40.68	40.49	40.30	40.12	39.93	39.74
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	67.43	67.41	67.40	67.38	67.37	67.36	67.34
ϕ cal100	39.55	39.37	39.18	38.99	38.81	38.62	38.43

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 RF-07/2018 (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 = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2018/09/21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	545116
Date of sterilization	2018/09/17

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