

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

pH calibration parameters Lot No. 1937 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.43	68.43	68.43	68.43	68.43	68.43	68.43
φ max	20.23	20.24	20.25	20.26	20.27	20.28	20.29
dpH	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
pH ₀	5.15	5.15	5.14	5.14	5.14	5.14	5.14
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.43	68.43	68.43	68.42	68.42	68.42	68.42
φ max	20.30	20.31	20.32	20.33	20.34	20.35	20.36
dpH	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
pH ₀	5.14	5.14	5.14	5.13	5.13	5.13	5.13
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.42	68.42	68.42	68.42	68.42	68.42	68.42
φ max	20.37	20.38	20.39	20.40	20.41	20.42	20.43
dpH	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
pH ₀	5.13	5.13	5.13	5.13	5.12	5.12	5.12

pH sensor properties

Dynamic range	pH 3.65 - 6.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95 - 4.10; ± 0.1 pH at pH 4.10 - 5.65; ± 0.25 pH at pH 5.65 - 5.80 (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	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 pH51-184500012 (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 2.00 ± 0.01 / pH 3.00 ± 0.015 / pH 7.00 ± 0.01 / pH 8.00 ± 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-48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.68 (pH Ser. 3289-RD, gain 6)
Date of calibration	2019/08/29

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DO calibration parameters Lot No. 1937 (BioLector® II/Pro, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	68.12	68.09	68.07	68.04	68.02	67.99	67.97
φ cal100	42.41	42.27	42.14	42.00	41.87	41.73	41.60
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	67.94	67.92	67.90	67.87	67.85	67.82	67.80
φ cal100	41.46	41.32	41.19	41.05	40.92	40.78	40.65
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	67.77	67.75	67.73	67.70	67.68	67.65	67.63
φ cal100	40.51	40.38	40.24	40.10	39.97	39.83	39.70

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-12/2018 (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-48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/08/29

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	658230
Date of sterilization	2019/08/05

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