

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

pH calibration parameters Lot No. 2005311 (BioLector® Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	67.13	67.22	67.31	67.40	67.50	67.59	67.68
φ max	15.62	15.65	15.68	15.72	15.75	15.78	15.82
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.38	5.38	5.37	5.36	5.36	5.35	5.35
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.77	67.86	67.95	68.04	68.13	68.22	68.31
φ max	15.85	15.88	15.91	15.95	15.98	16.01	16.04
dpH	-0.38	-0.38	-0.38	-0.38	-0.37	-0.37	-0.37
pH ₀	5.34	5.34	5.33	5.33	5.32	5.32	5.31
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.40	68.49	68.58	68.67	68.76	68.85	68.95
φ max	16.08	16.11	16.14	16.17	16.21	16.24	16.27
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.30	5.30	5.29	5.29	5.28	5.28	5.27

pH sensor properties

Dynamic range	pH 3.95 – 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 – 4.40; ± 0.1 pH at pH 4.40 – 6.05; ± 0.25 pH at pH 6.05 – 6.20 (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 pH51-194150150 (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 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-09-000F-0032
Calibration phase offset	pH -360.68 (pH Ser. 3288, gain 6)
Date of calibration	2020/04/24

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DO calibration parameters Lot No. 2005311 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.49	70.47	70.46	70.44	70.42	70.40	70.38
ϕ cal100	41.95	41.77	41.58	41.40	41.22	41.03	40.85
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.37	70.35	70.33	70.31	70.29	70.27	70.26
ϕ cal100	40.67	40.48	40.30	40.12	39.93	39.75	39.57
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.24	70.22	70.20	70.18	70.17	70.15	70.13
ϕ cal100	39.38	39.20	39.02	38.83	38.65	38.47	38.28

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-m2p-A 192050140 (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-09-000F-0032
Calibration phase offset	DO -360.67 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/04/24

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	754295
Date of sterilization	2020/04/20

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