

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

pH calibration parameters Lot No. 1902 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.03	70.06	70.09	70.12	70.14	70.17	70.20
φ max	15.76	15.78	15.81	15.83	15.85	15.87	15.89
dpH	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44
pH ₀	5.33	5.32	5.32	5.32	5.32	5.31	5.31
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.23	70.25	70.28	70.31	70.34	70.37	70.39
φ max	15.92	15.94	15.96	15.98	16.01	16.03	16.05
dpH	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44
pH ₀	5.31	5.31	5.30	5.30	5.30	5.30	5.29
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.42	70.45	70.48	70.50	70.53	70.56	70.59
φ max	16.07	16.09	16.12	16.14	16.16	16.18	16.21
dpH	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44	-0.44
pH ₀	5.29	5.29	5.29	5.28	5.28	5.28	5.28

pH sensor properties

Dynamic range	pH 3.70 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05 - 4.25; ± 0.1 pH at pH 4.25 - 5.90; ± 0.25 pH at pH 5.90 - 6.10 (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 pH51-184500006 (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 6.00 ± 0.01 / pH 7.00 ± 0.03, 20 °C); 150 mM Citrat-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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.68 (pH Ser. 3289-RD, gain 6)
Date of calibration	2019/02/22

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DO calibration parameters Lot No. 1902 (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	68.96	68.94	68.93	68.91	68.90	68.88	68.87
ϕ cal100	42.54	42.43	42.32	42.22	42.11	42.00	41.89
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.85	68.84	68.82	68.81	68.80	68.78	68.77
ϕ cal100	41.78	41.68	41.57	41.46	41.35	41.25	41.14
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.75	68.74	68.72	68.71	68.69	68.68	68.67
ϕ cal100	41.03	40.92	40.81	40.71	40.60	40.49	40.38

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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/02/22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	589719
Date of sterilization	2018/01/31

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