

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

pH calibration parameters Lot No. 2005301 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.14	68.20	68.25	68.31	68.37	68.43	68.48
ϕ max	17.76	17.79	17.82	17.86	17.89	17.92	17.95
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.24	5.24	5.23	5.23	5.22	5.22	5.21
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.54	68.60	68.66	68.72	68.77	68.83	68.89
ϕ max	17.99	18.02	18.05	18.09	18.12	18.15	18.19
dpH	-0.39	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.21	5.20	5.20	5.19	5.19	5.18	5.18
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	68.95	69.01	69.06	69.12	69.18	69.24	69.29
ϕ max	18.22	18.25	18.28	18.32	18.35	18.38	18.42
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.17	5.17	5.17	5.16	5.16	5.15	5.15

pH sensor properties

Dynamic range	pH 3.50 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.85 - 4.05; ± 0.1 pH at pH 4.05 - 5.85; ± 0.25 pH at pH 5.85 - 6.05 (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 pH51-194150145 (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 = 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	2020/05/05

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DO calibration parameters Lot No. 2005301 (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	70.75	70.73	70.72	70.70	70.68	70.66	70.64
φ cal100	42.68	42.48	42.29	42.09	41.90	41.71	41.51
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.63	70.61	70.59	70.57	70.56	70.54	70.52
φ cal100	41.32	41.12	40.93	40.74	40.54	40.35	40.15
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.50	70.49	70.47	70.45	70.43	70.41	70.40
φ cal100	39.96	39.76	39.57	39.38	39.18	38.99	38.79

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 = FlowerPlate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.68 (DO Ser.4170-RD, gain 4)
Date of calibration	2020/05/05

Sterilization procedure

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

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