

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

pH calibration parameters Lot No. 1925 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.14	69.14	69.15	69.15	69.15	69.15	69.16
ϕ max	15.27	15.27	15.27	15.27	15.27	15.27	15.27
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.24	5.24	5.24	5.24	5.24	5.24	5.24
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	69.16	69.16	69.17	69.17	69.17	69.17	69.18
ϕ max	15.27	15.26	15.26	15.26	15.26	15.26	15.26
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.24	5.24	5.23	5.23	5.23	5.23	5.23
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	69.18	69.18	69.18	69.19	69.19	69.19	69.20
ϕ max	15.26	15.25	15.25	15.25	15.25	15.25	15.25
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.23	5.23	5.23	5.23	5.22	5.22	5.22

pH sensor properties

Dynamic range	pH 3.70 - 6.30
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00 - 4.15; ± 0.1 pH at pH 4.15 - 5.85; ± 0.25 pH at pH 5.85 - 6.00 (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 pH51-184500010 (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 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 = 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	2019/05/15

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DO calibration parameters Lot No. 1925 (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	68.58	68.58	68.59	68.59	68.59	68.60	68.60
φ cal100	42.62	42.50	42.37	42.25	42.12	42.00	41.87
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	68.61	68.61	68.61	68.62	68.62	68.63	68.63
φ cal100	41.75	41.63	41.50	41.38	41.25	41.13	41.00
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	68.63	68.64	68.64	68.65	68.65	68.65	68.66
φ cal100	40.88	40.76	40.63	40.51	40.38	40.26	40.13

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 = 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	2019/05/15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	625276
Date of sterilization	2019/05/07

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