

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

pH calibration parameters Lot No. 2005304 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.42	67.48	67.54	67.61	67.67	67.73	67.80
ϕ max	17.10	17.12	17.15	17.18	17.21	17.24	17.26
dpH	-0.41	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40
pH ₀	5.22	5.22	5.22	5.21	5.21	5.20	5.20
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.86	67.92	67.98	68.05	68.11	68.17	68.24
ϕ max	17.29	17.32	17.35	17.37	17.40	17.43	17.46
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.19	5.19	5.18	5.18	5.17	5.17	5.16
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	68.30	68.36	68.43	68.49	68.55	68.62	68.68
ϕ max	17.48	17.51	17.54	17.57	17.59	17.62	17.65
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.39
pH ₀	5.16	5.16	5.15	5.15	5.14	5.14	5.13

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 pH51-194150148 (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 = RoundPlate (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	2020/05/06

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DO calibration parameters Lot No. 2005304 (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	70.82	70.81	70.79	70.78	70.76	70.74	70.73
φ cal100	42.71	42.51	42.31	42.11	41.91	41.72	41.52
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.71	70.70	70.68	70.67	70.65	70.63	70.62
φ cal100	41.32	41.12	40.92	40.73	40.53	40.33	40.13
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.60	70.59	70.57	70.56	70.54	70.52	70.51
φ cal100	39.93	39.74	39.54	39.34	39.14	38.94	38.75

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 = RoundPlate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.68 (DO Ser.4170-RD, gain 4)
Date of calibration	2020/05/06

Sterilization procedure

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

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