

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

pH calibration parameters Lot No. 1909 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.66	67.67	67.69	67.70	67.71	67.72	67.73
ϕ max	13.94	13.94	13.94	13.95	13.95	13.95	13.96
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.40	5.40	5.40	5.40	5.39	5.39	5.39
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.74	67.76	67.77	67.78	67.79	67.80	67.81
ϕ max	13.96	13.96	13.97	13.97	13.98	13.98	13.98
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.39	5.39	5.39	5.39	5.39	5.39	5.39
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.83	67.84	67.85	67.86	67.87	67.88	67.89
ϕ max	13.99	13.99	13.99	14.00	14.00	14.00	14.01
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.39	5.39	5.39	5.39	5.39	5.39	5.39

pH sensor properties

Dynamic range	pH 3.75 - 6.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.10 - 4.30; ± 0.1 pH at pH 4.30 - 6.25; ± 0.25 pH at pH 6.25 - 6.45 (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 pH51-184500007 (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 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 Round Well Plate (MTP-RMF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360,68 (pH Ser.3289, gain 6)
Date of calibration	2019/02/06

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DO calibration parameters Lot No. 1909 (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	67.62	67.61	67.59	67.57	67.55	67.54	67.52
ϕ cal100	41.48	41.40	41.31	41.23	41.14	41.06	40.97
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	67.50	67.48	67.47	67.45	67.43	67.41	67.40
ϕ cal100	40.89	40.80	40.72	40.63	40.55	40.46	40.38
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	67.38	67.36	67.35	67.33	67.31	67.29	67.28
ϕ cal100	40.29	40.21	40.12	40.04	39.95	39.87	39.78

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 = Microfluidic Round Well Plate (MTP-RMF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/02/06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	591212
Date of sterilization	2019/02/04

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