

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

pH calibration parameters Lot No. 2006301 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	71.96	72.03	72.09	72.15	72.22	72.28	72.34
ϕ max	20.11	20.16	20.20	20.25	20.29	20.34	20.38
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.39	-0.39
pH ₀	5.23	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	72.41	72.47	72.54	72.60	72.66	72.73	72.79
ϕ max	20.43	20.47	20.52	20.56	20.60	20.65	20.69
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
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	72.85	72.92	72.98	73.04	73.11	73.17	73.23
ϕ max	20.74	20.78	20.83	20.87	20.92	20.96	21.01
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.16	5.15	5.15	5.15	5.14	5.14	5.13

pH sensor properties

Dynamic range	pH 3.45 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.80 - 4.00; ± 0.1 pH at pH 4.00 – 5.80; ± 0.25 pH at pH 5.80 - 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 pH51-194150152 (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 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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.25 (pH Ser. 3288, gain 6)
Date of calibration	2020/06/15

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DO calibration parameters Lot No. 2006301 (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	70.54	70.53	70.51	70.49	70.48	70.46	70.44
φ cal100	43.06	42.87	42.68	42.49	42.31	42.12	41.93
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.43	70.41	70.39	70.38	70.36	70.34	70.32
φ cal100	41.74	41.55	41.36	41.17	40.98	40.79	40.60
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.31	70.29	70.27	70.26	70.24	70.22	70.21
φ cal100	40.41	40.22	40.03	39.84	39.65	39.46	39.27

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 (t ₉₀)	< 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 194150163 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.50 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/06/15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	766620
Date of sterilization	2020/05/25

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