

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

pH calibration parameters Lot No. 1923 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	68.62	68.65	68.68	68.71	68.74	68.78	68.81
ϕ max	15.64	15.66	15.68	15.70	15.72	15.74	15.76
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.28	5.28	5.27	5.27	5.27	5.27	5.26
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.84	68.87	68.91	68.94	68.97	69.00	69.03
ϕ max	15.78	15.80	15.82	15.85	15.87	15.89	15.91
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.26	5.26	5.26	5.25	5.25	5.25	5.25
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	69.07	69.10	69.13	69.16	69.20	69.23	69.26
ϕ max	15.93	15.95	15.97	15.99	16.01	16.03	16.05
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.24	5.24	5.24	5.24	5.24	5.23	5.23

pH sensor properties

Dynamic range	pH 3.60 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95 - 4.15; ± 0.1 pH at pH 4.15 - 6.00; ± 0.25 pH at pH 6.00 - 6.20 (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 pH51-18450009 (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 FlowerPlate (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.68 (pH Ser. 3289-RD, gain 6)
Date of calibration	2019/05/02

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DO calibration parameters Lot No. 1923 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	67.76	67.74	67.72	67.70	67.68	67.66	67.64
ϕ cal100	41.83	41.71	41.59	41.47	41.36	41.24	41.12
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	67.62	67.60	67.58	67.56	67.54	67.52	67.50
ϕ cal100	41.00	40.89	40.77	40.65	40.53	40.42	40.30
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	67.48	67.46	67.44	67.42	67.40	67.38	67.36
ϕ cal100	40.18	40.06	39.95	39.83	39.71	39.59	39.48

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 = Microfluidic FlowerPlate (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2019/05/02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	617573
Date of sterilization	2019/04/15

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