

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

pH calibration parameters Lot No. 1956 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	66.73	66.75	66.77	66.78	66.80	66.82	66.83
ϕ max	16.15	16.16	16.17	16.18	16.19	16.19	16.20
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.30	5.30	5.30	5.30	5.29	5.29	5.29
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	66.85	66.87	66.88	66.90	66.92	66.93	66.95
ϕ max	16.21	16.22	16.23	16.24	16.25	16.26	16.27
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.29	5.29	5.29	5.28	5.28	5.28	5.28
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.97	66.98	67.00	67.02	67.03	67.05	67.07
ϕ max	16.27	16.28	16.29	16.30	16.31	16.32	16.33
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.28	5.27	5.27	5.27	5.27	5.27	5.27

pH sensor properties

Dynamic range	pH 3.70 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05 - 4.25; ± 0.1 pH at pH 4.25 - 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 pH51-192050136 (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 = 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	2020/01/22

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DO calibration parameters Lot No. 1956 (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	69.22	69.21	69.20	69.19	69.18	69.17	69.16
ϕ cal100	39.91	39.81	39.70	39.60	39.50	39.40	39.29
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	69.15	69.14	69.13	69.12	69.11	69.10	69.09
ϕ cal100	39.19	39.09	38.99	38.89	38.78	38.68	38.58
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.08	69.07	69.06	69.05	69.04	69.03	69.02
ϕ cal100	38.48	38.38	38.27	38.17	38.07	37.97	37.86

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 = 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	2020/01/22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	716325
Date of sterilization	2020/01/16

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