

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

pH calibration parameters Lot No. 1943 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.45	69.45	69.45	69.45	69.45	69.45	69.45
φ max	17.35	17.36	17.37	17.38	17.39	17.40	17.41
dpH	-0.42	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43
pH ₀	5.23	5.23	5.23	5.23	5.23	5.23	5.22
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.45	69.44	69.44	69.44	69.44	69.44	69.44
φ max	17.42	17.43	17.44	17.45	17.46	17.47	17.48
dpH	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43
pH ₀	5.22	5.22	5.22	5.22	5.22	5.22	5.21
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.44	69.44	69.44	69.43	69.43	69.43	69.43
φ max	17.49	17.50	17.51	17.52	17.53	17.54	17.55
dpH	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43	-0.43
pH ₀	5.21	5.21	5.21	5.21	5.21	5.21	5.20

pH sensor properties

Dynamic range	pH 3.55 - 6.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90 - 4.15; ± 0.1 pH at pH 4.15 - 6.05; ± 0.25 pH at pH 6.05 - 6.25 (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 pH51-192050131 (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	2019/10/16

HEADQUARTERS EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2
52499 Baesweiler, Germany
Tel.: +49 - 2401 805 330
Fax: +49 - 2401 805 33
info@m2p-labs.com

USA / CANADA

m2p-labs, Inc.
62-64 Enter Lane
Islandia, NY 11749, USA
Phone: +1 631 501 1878
Fax: +1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC

m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone: +852 6092 6778
Fax: +852 3594 6381
infoAsia@m2p-labs.com

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

DO calibration parameters Lot No. 1943 (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	67.83	67.81	67.79	67.77	67.76	67.74	67.72
φ cal100	42.30	42.17	42.04	41.92	41.79	41.66	41.53
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	67.70	67.68	67.66	67.64	67.62	67.60	67.58
φ cal100	41.40	41.27	41.14	41.01	40.88	40.75	40.62
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	67.56	67.54	67.52	67.50	67.48	67.46	67.44
φ cal100	40.49	40.36	40.23	40.10	39.97	39.84	39.71

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	2019/10/16

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	671293
Date of sterilization	2019/09/10

HEADQUARTERS EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2
52499 Baesweiler, Germany
Tel.: +49 - 2401 805 330
Fax: +49 - 2401 805 33
info@m2p-labs.com

USA / CANADA

m2p-labs, Inc.
62-64 Enter Lane
Islandia, NY 11749, USA
Phone: +1 631 501 1878
Fax: +1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC

m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone: +852 6092 6778
Fax: +852 3594 6381
infoAsia@m2p-labs.com