

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

pH calibration parameters Lot No. 2003311 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	67.53	67.58	67.62	67.67	67.71	67.76	67.80
φ max	16.52	16.56	16.61	16.66	16.70	16.75	16.80
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.40
pH ₀	5.30	5.30	5.30	5.29	5.29	5.29	5.28
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.85	67.89	67.94	67.98	68.03	68.07	68.12
φ max	16.84	16.89	16.94	16.98	17.03	17.08	17.12
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.28	5.28	5.27	5.27	5.27	5.26	5.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.16	68.21	68.25	68.30	68.34	68.39	68.43
φ max	17.17	17.22	17.26	17.31	17.36	17.40	17.45
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.26	5.25	5.25	5.25	5.24	5.24	5.24

pH sensor properties

Dynamic range	pH 3.70 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05 - 4.25; ± 0.1 pH at pH 4.25 - 6.05; ± 0.25 pH at pH 6.05 - 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 pH51-192050138 (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	2020/03/24

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. 2003311 (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	69.78	69.76	69.73	69.71	69.69	69.67	69.64
φ cal100	41.20	41.00	40.81	40.61	40.42	40.22	40.03
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.62	69.60	69.58	69.56	69.53	69.51	69.49
φ cal100	39.83	39.63	39.44	39.24	39.05	38.85	38.66
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.47	69.44	69.42	69.40	69.38	69.36	69.33
φ cal100	38.46	38.27	38.07	37.88	37.68	37.49	37.29

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 -360.67 (DO Ser.4170-RD, gain 4)
Date of calibration	2020/03/24

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	738725
Date of sterilization	2020/03/10

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