

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

pH calibration parameters Lot No.2103211+2103217 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.23	68.16	68.09	68.02	67.95	67.88	67.81
φ max	12.70	12.63	12.57	12.50	12.44	12.37	12.31
dpH	0.83	0.83	0.83	0.83	0.83	0.83	0.83
pH ₀	6.62	6.61	6.60	6.60	6.59	6.58	6.57

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.74	67.67	67.60	67.53	67.46	67.39	67.32
φ max	12.24	12.18	12.11	12.05	11.98	11.92	11.85
dpH	0.83	0.83	0.83	0.83	0.83	0.83	0.83
pH ₀	6.56	6.55	6.54	6.53	6.53	6.52	6.51

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.25	67.17	67.10	67.03	66.96	66.89	66.82
φ max	11.79	11.72	11.66	11.59	11.53	11.46	11.40
dpH	0.83	0.83	0.83	0.83	0.83	0.83	0.83
pH ₀	6.50	6.49	6.48	6.47	6.47	6.46	6.45

pH sensor properties

Dynamic range	pH 3.80 - 8.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65-5.15; ± 0.1 pH at pH 5.15-7.60; ± 0.25 pH at pH 7.60-8.15 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	5 °C to 50 °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); high concentration of fluorescent molecules in the visible range can interfere (GFP, (e)YFP); complex media can cause a pH-shift (peptone, yeast extract)
Basic material	pH sensor LG1 1939-01 (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 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic (Round Well) Plate (MTP-(R)MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.15 (pH Ser. 3305, gain 8)
Date of calibration	2021-03-25

HEADQUARTERS EUROPE

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

SUPPORT

EUROPE
Phone +49 - 2401 805 335
support@m2p-labs.com

N./S. AMERICAS
Phone +1 631 501 1878
supportUS@m2p-labs.com

ASIA PACIFIC
Phone +852 6092 6778
supportAsia@m2p-labs.com

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

DO calibration parameters Lot No.2103211+2103217 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.68	71.67	71.66	71.65	71.64	71.63	71.62
ϕ cal100	42.12	41.94	41.76	41.58	41.40	41.22	41.04

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.61	71.60	71.59	71.57	71.56	71.55	71.54
ϕ cal100	40.87	40.69	40.51	40.33	40.15	39.97	39.79

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.53	71.52	71.51	71.50	71.49	71.48	71.47
ϕ cal100	39.62	39.44	39.26	39.08	38.90	38.72	38.54

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-19536789 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic (Round Well) Plate (MTP-(R)MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-03-25

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	871528
Date of sterilization	2021-03-11

HEADQUARTERS EUROPE

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

SUPPORT

EUROPE
Phone +49 - 2401 805 335
support@m2p-labs.com

N./S. AMERICAS
Phone +1 631 501 1878
supportUS@m2p-labs.com

ASIA PACIFIC
Phone +852 6092 6778
supportAsia@m2p-labs.com