

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

pH calibration parameters Lot No.2115301 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.90	63.08	63.26	63.43	63.61	63.79	63.97
φ max	13.66	13.70	13.74	13.78	13.82	13.86	13.90
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.37	5.37	5.36	5.36	5.35	5.34	5.34

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	64.15	64.33	64.50	64.68	64.86	65.04	65.22
φ max	13.95	13.99	14.03	14.07	14.11	14.15	14.19
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.33	5.33	5.32	5.31	5.31	5.30	5.30

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	65.40	65.57	65.75	65.93	66.11	66.29	66.47
φ max	14.23	14.27	14.31	14.35	14.39	14.43	14.47
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.37
pH ₀	5.29	5.28	5.28	5.27	5.27	5.26	5.25

pH sensor properties

Dynamic range	pH 3.85 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15-4.35; ± 0.1 pH at pH 4.35-6.00; ± 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	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 pH51-202850557+558 (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 ± 0.02 / pH 3.00 ± 0.02 / pH 7.00 ± 0.02 / 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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2021-11-17

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 BioLection software!

DO calibration parameters Lot No.2115301 (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	71.33	71.32	71.31	71.30	71.29	71.28	71.27
ϕ cal100	41.34	41.18	41.01	40.84	40.67	40.50	40.33

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.26	71.25	71.24	71.23	71.22	71.21	71.20
ϕ cal100	40.16	40.00	39.83	39.66	39.49	39.32	39.15

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.19	71.18	71.17	71.16	71.15	71.14	71.13
ϕ cal100	38.98	38.82	38.65	38.48	38.31	38.14	37.97

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-21160296 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-11-17

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	963394
Date of sterilization	2021-11-03

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