

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

pH calibration parameters Lot No.2113121 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.08	63.03	62.97	62.91	62.85	62.80	62.74
φ max	13.91	13.92	13.92	13.92	13.93	13.93	13.94
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.35	6.35	6.34	6.34	6.33	6.32	6.32

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.68	62.63	62.57	62.51	62.46	62.40	62.34
φ max	13.94	13.94	13.95	13.95	13.95	13.96	13.96
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.31	6.31	6.30	6.29	6.29	6.28	6.28

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.28	62.23	62.17	62.11	62.06	62.00	61.94
φ max	13.97	13.97	13.97	13.98	13.98	13.98	13.99
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.27	6.27	6.26	6.25	6.25	6.24	6.24

pH sensor properties

Dynamic range	pH 4.35 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.85-5.15; ± 0.1 pH at pH 5.15-7.15; ± 0.25 pH at pH 7.15-7.45 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 HP8-1811-01_4 (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 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7")
Date of calibration	2021-09-20

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 BioLecton software!

DO calibration parameters Lot No.2113121 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.94	72.92	72.89	72.86	72.83	72.81	72.78
ϕ cal100	42.09	41.91	41.73	41.55	41.37	41.18	41.00

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.75	72.72	72.69	72.67	72.64	72.61	72.58
ϕ cal100	40.82	40.64	40.46	40.28	40.10	39.92	39.73

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.56	72.53	72.50	72.47	72.44	72.42	72.39
ϕ cal100	39.55	39.37	39.19	39.01	38.83	38.65	38.46

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 PSt3-HG-1921-01_2 (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 = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.26 (DO Ser. 4103, gain 7)
Date of calibration	2021-09-20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	941459
Date of sterilization	2021-09-09

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