

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

pH calibration parameters Lot No. 2006101 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	64.25	64.19	64.12	64.06	63.99	63.92	63.86
ϕ max	13.91	13.91	13.91	13.92	13.92	13.92	13.93
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.25	6.24	6.24	6.23	6.23	6.22	6.21
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	63.79	63.73	63.66	63.60	63.53	63.47	63.40
ϕ max	13.93	13.93	13.94	13.94	13.95	13.95	13.95
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.21	6.20	6.20	6.19	6.18	6.18	6.17
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.34	63.27	63.21	63.14	63.08	63.01	62.94
ϕ max	13.96	13.96	13.96	13.97	13.97	13.97	13.98
dpH	0.51	0.51	0.51	0.51	0.51	0.52	0.52
pH ₀	6.17	6.16	6.16	6.15	6.14	6.14	6.13

pH sensor properties

Dynamic range	pH 4.35 – 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.80 – 5.10; ± 0.1 pH at pH 5.10 – 7.00; ± 0.25 pH at pH 7.00 – 7.30 (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_2 (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 ± 0.01 / pH 4.00 ± 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 = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.53 (pH Ser. 3111, gain 7)
Date of calibration	2020/06/09

HEADQUARTERS EUROPE

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

SUPPORT

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

AMERICA
 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. 2006101 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.91	72.86	72.81	72.76	72.71	72.66	72.61
ϕ cal100	44.34	44.13	43.93	43.72	43.52	43.31	43.10
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.56	72.51	72.46	72.41	72.36	72.31	72.26
ϕ cal100	42.90	42.69	42.49	42.28	42.07	41.87	41.66
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.21	72.16	72.11	72.06	72.01	71.96	71.91
ϕ cal100	41.46	41.25	41.05	40.84	40.63	40.43	40.22

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-1810-01_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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.32 (DO Ser.4103, gain 7)
Date of calibration	2020/06/09

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	766620
Date of sterilization	2020/05/25

HEADQUARTERS EUROPE

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

SUPPORT

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

AMERICA
Phone +1 631 501 1878
supportUS@m2p-labs.com

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