

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

pH calibration parameters Lot No. 1702 (BioLector® II/Pro)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	65.47	65.37	65.26	65.15	65.04	64.94	64.83
ϕ max	18.41	18.41	18.40	18.39	18.39	18.38	18.38
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.78	6.77	6.75	6.74	6.73	6.71	6.70
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.72	64.61	64.51	64.40	64.29	64.18	64.07
ϕ max	18.37	18.37	18.36	18.36	18.35	18.35	18.34
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.69	6.68	6.66	6.65	6.64	6.63	6.61
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.97	63.86	63.75	63.64	63.54	63.43	63.32
ϕ max	18.33	18.33	18.32	18.32	18.31	18.31	18.30
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.60	6.59	6.58	6.56	6.55	6.54	6.53

pH sensor properties

Dynamic range	pH 4.05 - 8.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.55 - 5.15; ± 0.1 pH at pH 5.15 - 7.60; ± 0.25 pH at pH 7.60 - 8.25 (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 HP8-1427-02_3 (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 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 FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0033
Calibration phase offset	pH -1.83 (pH Ser.3144-RD, gain 7)
Date of calibration	2017/03/02

EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2 | 52499 Baesweiler | Germany
Phone +49-2401-805-330 | Fax: +49-2401-805-333
info@m2p-labs.com | support@m2p-labs.com

USA

m2p-labs, Inc.
400 Oser Ave, Suite 1650 | Hauppauge, NY 11788 | USA
Phone +1-631-501-1878 | Fax +1-631-501-1060
infoUS@m2p-labs.com | supportUS@m2p-labs.com

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

DO calibration parameters Lot No. 1702 (BioLector® II/Pro)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.57	72.52	72.47	72.42	72.37	72.32	72.27
φ cal100	43.86	43.62	43.39	43.15	42.91	42.68	42.44
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.22	72.17	72.12	72.07	72.02	71.97	71.92
φ cal100	42.20	41.96	41.73	41.49	41.25	41.02	40.78
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.87	71.82	71.77	71.73	71.68	71.63	71.58
φ cal100	40.54	40.30	40.07	39.83	39.59	39.36	39.12

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 Pst3-HG-1426-03_3 (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 FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0033
Calibration phase offset	DO -360.85 (DO Ser.4154-RD, gain 7)
Date of calibration	2017/03/02

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	341876
Date of sterilization	2017/02/22

EUROPE

m2p-labs GmbH
 Arnold-Sommerfeld-Ring 2 | 52499 Baesweiler | Germany
 Phone +49-2401-805-330 | Fax: +49-2401-805-333
 info@m2p-labs.com | support@m2p-labs.com

USA

m2p-labs, Inc.
 400 Oser Ave, Suite 1650 | Hauppauge, NY 11788 | USA
 Phone +1-631-501-1878 | Fax +1-631-501-1060
 infoUS@m2p-labs.com | supportUS@m2p-labs.com