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

pH calibration parameters Lot No. 1950 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	64.20	64.17	64.14	64.11	64.07	64.04	64.01
ϕ max	13.54	13.55	13.55	13.55	13.56	13.56	13.57
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH_0	6.23	6.23	6.22	6.22	6.21	6.21	6.21
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	63.98	63.95	63.92	63.89	63.85	63.82	63.79
ϕ max	13.57	13.58	13.58	13.59	13.59	13.60	13.60
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH_0	6.20	6.20	6.19	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	63.76	63.73	63.70	63.67	63.63	63.60	63.57
ϕ max	13.61	13.61	13.61	13.62	13.62	13.63	13.63
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH_0	6.17	6.16	6.16	6.16	6.15	6.15	6.14

pH sensor properties

Dynamic range	pH 4.25 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 - 5.05; ± 0.1 pH at pH 5.05 – 7.05; ± 0.25 pH at pH 7.05 - 7.35 (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 Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -1.85 (pH Ser.3111, gain 7)
Date of calibration	2019/12/02

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

USA / CANADA
m2p-labs, Inc.
62-64 Enter Lane
Islandia,NY 11749, USA
Phone:+1 631 501 1878
Fax:+1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC
m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone:+852 6092 6778
Fax:+852 3594 6381
infoAsia@m2p-labs.com

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

DO calibration parameters Lot No. 1950 (BioLector® II, filter module ID-203/403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.46	72.44	72.42	72.40	72.38	72.36	72.34
ϕ cal100	43.09	42.96	42.84	42.72	42.60	42.47	42.35
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	72.32	72.30	72.28	72.26	72.24	72.22	72.20
ϕ cal100	42.23	42.10	41.98	41.86	41.73	41.61	41.49
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	72.18	72.16	72.14	72.12	72.10	72.08	72.06
ϕ cal100	41.37	41.24	41.12	41.00	40.87	40.75	40.63

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-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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.52 (DO Ser.4103, gain 7)
Date of calibration	2019/12/02

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Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	699875
Date of sterilization	2019/11/21

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

USA / CANADA
m2p-labs, Inc.
62-64 Enter Lane
Islandia,NY 11749, USA
Phone:+1 631 501 1878
Fax:+1 631 501 1060
infoUS@m2p-labs.com

ASIA PACIFIC
m2p-labs Limited
Unit 117, Biotech Centre 2, HKSTP
Shatin, NT, Hong Kong
Phone:+852 6092 6778
Fax:+852 3594 6381
infoAsia@m2p-labs.com