

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

**pH calibration parameters Lot No.2104101 and 2104107 (BioLector® II/Pro, filter module ID-202/-402)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.33	64.26	64.19	64.13	64.06	63.99	63.92
φ max	12.72	12.72	12.72	12.73	12.73	12.73	12.73
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.14	6.13	6.12	6.12	6.11	6.11	6.10

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.85	63.79	63.72	63.65	63.58	63.51	63.45
φ max	12.74	12.74	12.74	12.74	12.74	12.75	12.75
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.09	6.09	6.08	6.07	6.07	6.06	6.05

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.38	63.31	63.24	63.17	63.11	63.04	62.97
φ max	12.75	12.75	12.75	12.76	12.76	12.76	12.76
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.05	6.04	6.03	6.03	6.02	6.02	6.01

**pH sensor properties**

Dynamic range	pH 4.10 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.60-4.90; ± 0.1 pH at pH 4.90-6.95; ± 0.25 pH at pH 6.95-7.25 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 HP8-1811-01_3 (at least stable for 7 days with CertiPUR-buffer) <b>pH sensors are light-sensitive; please protect them from direct light!</b>

**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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2021-04-14

**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

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**DO calibration parameters Lot No.2104101, 2104107 and 2104181 (BioLector® II/Pro, filter module ID-203/-403)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	73.31	73.25	73.19	73.14	73.08	73.02	72.96
ϕ cal100	43.58	43.37	43.16	42.95	42.73	42.52	42.31

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.90	72.85	72.79	72.73	72.67	72.62	72.56
ϕ cal100	42.10	41.88	41.67	41.46	41.25	41.03	40.82

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.50	72.44	72.38	72.33	72.27	72.21	72.15
ϕ cal100	40.61	40.40	40.18	39.97	39.76	39.55	39.33

**DO sensor properties**

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O2 (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O2 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_3 (at least stable for 7 days with CertiPUR-buffer) <b>DO sensors are light-sensitive; please protect them from direct light!</b>

**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 -360.26 (DO Ser. 4103, gain 7)
Date of calibration	2021-04-14

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	879108
Date of sterilization	2021-03-30

**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

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support@m2p-labs.com

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supportUS@m2p-labs.com

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