

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

**pH calibration parameters Lot No.2108101 and 2108107 (BioLector® I, filter module ID-102/-302)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	56.66	56.60	56.54	56.48	56.42	56.36	56.31
φ max	11.06	11.06	11.06	11.06	11.06	11.06	11.06
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH <sub>0</sub>	6.25	6.24	6.23	6.23	6.22	6.21	6.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	56.25	56.19	56.13	56.07	56.01	55.95	55.89
φ max	11.06	11.06	11.06	11.06	11.06	11.07	11.07
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH <sub>0</sub>	6.19	6.18	6.17	6.17	6.16	6.15	6.14

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	55.83	55.78	55.72	55.66	55.60	55.54	55.48
φ max	11.07	11.07	11.07	11.07	11.07	11.07	11.07
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH <sub>0</sub>	6.13	6.12	6.11	6.11	6.10	6.09	6.08

### pH sensor properties

Dynamic range	pH 4.20 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75-5.10; ± 0.1 pH at pH 5.10-6.95; ± 0.25 pH at pH 6.95-7.30 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_4 (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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower / Round Well Plate (MTP-(R)48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	pH 255.90 (pH Ser. 3403, gain 55)
Date of calibration	2021-07-02

#### 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 BioLector software!

**DO calibration parameters Lot No.2108101 and 2108107 (BioLector® I, filter module ID-103/-303)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.65	72.66	72.67	72.69	72.70	72.71	72.72
ϕ cal100	43.92	43.68	43.45	43.21	42.98	42.74	42.51

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.74	72.75	72.76	72.78	72.79	72.80	72.81
ϕ cal100	42.27	42.03	41.80	41.56	41.33	41.09	40.86

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.83	72.84	72.85	72.87	72.88	72.89	72.91
ϕ cal100	40.62	40.39	40.15	39.92	39.68	39.45	39.21

**DO sensor properties**

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % O <sub>2</sub> (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O <sub>2</sub> per day (sampling interval of 6 min)
Response time (t <sub>90</sub> )	< 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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower / Round Well Plate (MTP-(R)48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	DO 332.50 (DO Ser. 3402, gain 70)
Date of calibration	2021-07-02

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	911177
Date of sterilization	2021-06-24

**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