

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

**pH calibration parameters Lot No.2103101 + 2103107 (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	63.60	63.55	63.50	63.45	63.40	63.35	63.30
φ max	12.39	12.41	12.42	12.44	12.45	12.47	12.48
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH <sub>0</sub>	6.22	6.21	6.20	6.19	6.18	6.17	6.17

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.25	63.20	63.14	63.09	63.04	62.99	62.94
φ max	12.50	12.52	12.53	12.55	12.56	12.58	12.59
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH <sub>0</sub>	6.16	6.15	6.14	6.13	6.12	6.12	6.11

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.89	62.84	62.79	62.74	62.69	62.64	62.59
φ max	12.61	12.62	12.64	12.66	12.67	12.69	12.70
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH <sub>0</sub>	6.10	6.09	6.08	6.07	6.06	6.06	6.05

### pH sensor properties

Dynamic range	pH 4.15 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65-5.00; ± 0.1 pH at pH 5.00-7.00; ± 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_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	2021-03-23

#### 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.2103101 + 2103107 (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	72.80	72.76	72.71	72.67	72.63	72.59	72.55
ϕ cal100	43.98	43.75	43.52	43.29	43.06	42.83	42.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.50	72.46	72.42	72.38	72.34	72.30	72.25
ϕ cal100	42.37	42.13	41.90	41.67	41.44	41.21	40.98

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.21	72.17	72.13	72.09	72.04	72.00	71.96
ϕ cal100	40.75	40.52	40.29	40.06	39.82	39.59	39.36

**DO sensor properties**

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % 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 = 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	2021-03-23

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	871528
Date of sterilization	2021-03-11

**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