

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

**pH calibration parameters Lot No. 2005201 (BioLector® II/Pro, filter module ID-221/-421)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.17	68.11	68.06	68.00	67.94	67.89	67.83
φ max	10.44	10.39	10.34	10.29	10.24	10.19	10.14
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH <sub>0</sub>	6.13	6.12	6.11	6.10	6.09	6.08	6.07
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.77	67.72	67.66	67.61	67.55	67.49	67.44
φ max	10.09	10.04	9.99	9.94	9.89	9.84	9.79
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH <sub>0</sub>	6.06	6.05	6.04	6.02	6.01	6.00	5.99
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.38	67.33	67.27	67.21	67.16	67.10	67.05
φ max	9.74	9.69	9.64	9.59	9.54	9.49	9.44
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH <sub>0</sub>	5.98	5.97	5.96	5.95	5.94	5.93	5.92

**pH sensor properties**

Dynamic range	pH 3.80 – 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 – 4.80; ± 0.1 pH at pH 4.80 – 7.00; ± 0.25 pH at pH 7.00 – 7.40 (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 LG1-1840-01 (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 2.00 ± 0.01 / pH 3.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.35 (pH Ser. 3305, gain 8)
Date of calibration	2020/04/28

**HEADQUARTERS EUROPE**

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

**SUPPORT**

**EUROPE**  
 Phone +49 - 2401 805 335  
 support@m2p-labs.com

**AMERICA**  
 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 BioLecton software!

### DO calibration parameters Lot No. 2005201 (BioLector® II/Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.27	70.25	70.23	70.21	70.20	70.18	70.16
φ cal100	42.40	42.22	42.04	41.85	41.67	41.48	41.30
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.14	70.12	70.10	70.08	70.06	70.04	70.03
φ cal100	41.11	40.93	40.75	40.56	40.38	40.19	40.01
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.01	69.99	69.97	69.95	69.93	69.91	69.89
φ cal100	39.83	39.64	39.46	39.27	39.09	38.90	38.72

### 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 RF-m2p-A 194150162 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.67 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/04/28

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	754295
Date of sterilization	2020/04/20

#### HEADQUARTERS EUROPE

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

#### SUPPORT

**EUROPE**  
Phone +49 - 2401 805 335  
support@m2p-labs.com

**AMERICA**  
Phone +1 631 501 1878  
supportUS@m2p-labs.com

**ASIA PACIFIC**  
Phone +852 6092 6778  
supportAsia@m2p-labs.com