

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

**pH calibration parameters Lot No.2112221 (BioLector® Pro, filter module ID-221/-421)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	66.97	66.91	66.84	66.78	66.71	66.65	66.59
φ max	13.20	13.13	13.05	12.97	12.89	12.82	12.74
dpH	0.79	0.80	0.80	0.80	0.80	0.80	0.80
pH <sub>0</sub>	6.66	6.66	6.65	6.64	6.63	6.62	6.61

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	66.52	66.46	66.39	66.33	66.26	66.20	66.13
φ max	12.66	12.59	12.51	12.43	12.36	12.28	12.20
dpH	0.80	0.80	0.80	0.80	0.80	0.80	0.80
pH <sub>0</sub>	6.60	6.60	6.59	6.58	6.57	6.56	6.55

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	66.07	66.00	65.94	65.88	65.81	65.75	65.68
φ max	12.12	12.05	11.97	11.89	11.82	11.74	11.66
dpH	0.80	0.80	0.80	0.80	0.80	0.80	0.80
pH <sub>0</sub>	6.54	6.53	6.53	6.52	6.51	6.50	6.49

**pH sensor properties**

Dynamic range	pH 4.00 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75-5.25; ± 0.1 pH at pH 5.25-7.60; ± 0.25 pH at pH 7.60-8.05 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 1939-01_2 (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 = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.15 (pH Ser. 3305, gain 8)
Date of calibration	2021-08-23

**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 BioLecton software!

**DO calibration parameters Lot No.2112221 (BioLector® Pro, filter module ID-228/-428)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.77	71.75	71.74	71.72	71.70	71.68	71.67
ϕ cal100	41.93	41.77	41.60	41.44	41.27	41.11	40.94

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.65	71.63	71.62	71.60	71.58	71.57	71.55
ϕ cal100	40.78	40.61	40.45	40.28	40.12	39.95	39.79

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.53	71.52	71.50	71.48	71.47	71.45	71.43
ϕ cal100	39.62	39.46	39.29	39.13	38.96	38.80	38.63

**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-211025003 (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 = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-08-23

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	932566
Date of sterilization	2021-08-17

**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