

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

**pH calibration parameters Lot No. 2010321 (BioLector® Pro, filter module ID-424)**

Temperature	<b>20°C</b>	<b>21°C</b>	<b>22°C</b>	<b>23°C</b>	<b>24°C</b>	<b>25°C</b>	<b>26°C</b>
$\phi$ min	71.26	71.35	71.44	71.54	71.63	71.72	71.82
$\phi$ max	13.06	13.08	13.11	13.14	13.16	13.19	13.22
dpH	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49
pH <sub>0</sub>	5.27	5.27	5.26	5.26	5.26	5.25	5.25
Temperature	<b>27°C</b>	<b>28°C</b>	<b>29°C</b>	<b>30°C</b>	<b>31°C</b>	<b>32°C</b>	<b>33°C</b>
$\phi$ min	71.91	72.00	72.10	72.19	72.28	72.38	72.47
$\phi$ max	13.24	13.27	13.30	13.32	13.35	13.38	13.40
dpH	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49	-0.49
pH <sub>0</sub>	5.24	5.24	5.23	5.23	5.22	5.22	5.21
Temperature	<b>34°C</b>	<b>35°C</b>	<b>36°C</b>	<b>37°C</b>	<b>38°C</b>	<b>39°C</b>	<b>40°C</b>
$\phi$ min	72.57	72.66	72.75	72.85	72.94	73.03	73.13
$\phi$ max	13.43	13.46	13.48	13.51	13.54	13.56	13.59
dpH	-0.49	-0.49	-0.49	-0.49	-0.50	-0.50	-0.50
pH <sub>0</sub>	5.21	5.20	5.20	5.20	5.19	5.19	5.18

**pH sensor properties**

Dynamic range	pH 3.35 – 6.9
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.8 – 4.05; ± 0.1 pH at pH 4.05 – 6.2; ± 0.25 pH at pH 6.2 – 6.45 (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	15 °C to 40 °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)
Basic material	pH sensor pH51- 200950163-166 (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 7.00 ± 0.01 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2020/11/04

**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. 2010321 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.90	68.89	68.88	68.87	68.86	68.85	68.84
ϕ cal100	41.07	40.91	40.76	40.61	40.45	40.30	40.15
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.83	68.82	68.81	68.80	68.79	68.78	68.77
ϕ cal100	39.99	39.84	39.69	39.53	39.38	39.23	39.07
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.76	68.75	68.74	68.74	68.73	68.72	68.71
ϕ cal100	38.92	38.77	38.61	38.46	38.31	38.16	38.00

### 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 (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 RF-m2p-A 202850572 (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 = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower/ (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/11/04

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	815113
Date of sterilization	2020/10/15

#### 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