

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

**pH calibration parameters Lot No. 2006321 (BioLector® Pro, filter module ID-424)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.00	71.07	71.13	71.19	71.25	71.32	71.38
φ max	16.20	16.23	16.26	16.29	16.32	16.36	16.39
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH <sub>0</sub>	5.30	5.30	5.29	5.29	5.29	5.28	5.28
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.44	71.50	71.57	71.63	71.69	71.75	71.82
φ max	16.42	16.45	16.48	16.52	16.55	16.58	16.61
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH <sub>0</sub>	5.27	5.27	5.27	5.26	5.26	5.25	5.25
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.88	71.94	72.01	72.07	72.13	72.19	72.26
φ max	16.64	16.68	16.71	16.74	16.77	16.81	16.84
dpH	-0.38	-0.38	-0.37	-0.37	-0.37	-0.37	-0.37
pH <sub>0</sub>	5.25	5.24	5.24	5.23	5.23	5.23	5.22

**pH sensor properties**

Dynamic range	pH 3.85 - 6.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15 - 4.30; ± 0.1 pH at pH 4.30 – 6.00; ± 0.25 pH at pH 6.00 - 6.15 (batch calibration)
Response time (t <sub>90</sub> )	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 pH51-194150154 (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-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.25 (pH Ser. 3288, gain 6)
Date of calibration	2020/06/02

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### DO calibration parameters Lot No. 2006321 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.38	70.42	70.45	70.48	70.51	70.54	70.57
φ cal100	41.98	41.81	41.63	41.46	41.28	41.10	40.93
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.60	70.63	70.66	70.70	70.73	70.76	70.79
φ cal100	40.75	40.58	40.40	40.22	40.05	39.87	39.70
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.82	70.85	70.88	70.91	70.94	70.98	71.01
φ cal100	39.52	39.34	39.17	38.99	38.82	38.64	38.46

### 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 200950182 (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-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.50 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/06/02

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	766620
Date of sterilization	2020/05/25

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