

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

### pH calibration parameters Lot No. 2014111 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.05	62.99	62.92	62.85	62.79	62.72	62.65
φ max	13.46	13.45	13.44	13.43	13.42	13.41	13.40
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH <sub>0</sub>	6.44	6.43	6.42	6.41	6.40	6.39	6.38
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.58	62.52	62.45	62.38	62.32	62.25	62.18
φ max	13.39	13.38	13.37	13.36	13.35	13.34	13.33
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH <sub>0</sub>	6.37	6.36	6.35	6.34	6.33	6.32	6.31
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.11	62.05	61.98	61.91	61.84	61.78	61.71
φ max	13.32	13.31	13.30	13.29	13.28	13.27	13.26
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH <sub>0</sub>	6.30	6.29	6.28	6.27	6.26	6.25	6.24

### pH sensor properties

Dynamic range	pH 4.5 – 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5-5.25; ± 0.1 pH at pH 5.25-7.1 ± 0.25 pH at pH 7.1-7.4 (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 Citrat-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 = Microfluidic Flower (MTP-MF32-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.460000 (pH Ser.3111, gain 7)
Date of calibration	2021/01/20

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### DO calibration parameters Lot No. 2014111 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.46	72.42	72.38	72.34	72.31	72.27	72.23
φ cal100	44.15	43.93	43.72	43.50	43.29	43.07	42.86
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.19	72.15	72.11	72.07	72.04	72.00	71.96
φ cal100	42.64	42.43	42.21	42.00	41.78	41.57	41.35
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.92	71.88	71.84	71.80	71.77	71.73	71.69
φ cal100	41.14	40.92	40.71	40.49	40.28	40.06	39.85

### 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 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 = Microfluidic Flower (MTP-MF32-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.260010 (DO Ser. 4103, gain 7)
Date of calibration	2021/01/20

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	845636
Date of sterilization	2021/01/11

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