

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

pH calibration parameters Lot No. 2011111 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.94	62.87	62.81	62.74	62.68	62.61	62.55
φ max	14.54	14.54	14.53	14.53	14.53	14.53	14.52
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.58	6.57	6.56	6.55	6.54	6.53	6.52
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.48	62.42	62.35	62.28	62.22	62.15	62.09
φ max	14.52	14.52	14.52	14.51	14.51	14.51	14.50
dpH	0.53	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.51	6.50	6.49	6.48	6.47	6.46	6.45
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.02	61.96	61.89	61.83	61.76	61.70	61.63
φ max	14.50	14.50	14.50	14.49	14.49	14.49	14.49
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.44	6.43	6.42	6.41	6.40	6.39	6.38

pH sensor properties

Dynamic range	pH 4.65 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15 - 5.40; ± 0.1 pH at pH 5.40 - 7.20; ± 0.25 pH at pH 7.20 - 7.50 (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) pH sensors are light-sensitive; please protect them from direct light!

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 -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2020/11/27

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DO calibration parameters Lot No. 201111 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.08	72.05	72.02	71.99	71.96	71.92	71.89
φ cal100	43.46	43.24	43.01	42.79	42.56	42.34	42.11
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.86	71.83	71.79	71.76	71.73	71.70	71.67
φ cal100	41.89	41.66	41.43	41.21	40.98	40.76	40.53
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.63	71.60	71.57	71.54	71.50	71.47	71.44
φ cal100	40.31	40.08	39.86	39.63	39.41	39.18	38.95

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O ₂ (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O ₂ 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 Pst3-HG-1810-01_3 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

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 -360.26 (DO Ser.4103, gain 7)
Date of calibration	2020/11/27

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	829779
Date of sterilization	2020/11/23

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