

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

pH calibration parameters Lot No.2112111 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.99	62.93	62.88	62.83	62.77	62.72	62.66
φ max	13.45	13.45	13.44	13.43	13.42	13.41	13.40
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.34	6.33	6.33	6.32	6.31	6.30	6.30

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.61	62.56	62.50	62.45	62.40	62.34	62.29
φ max	13.39	13.39	13.38	13.37	13.36	13.35	13.34
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.29	6.28	6.27	6.26	6.26	6.25	6.24

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.24	62.18	62.13	62.08	62.02	61.97	61.91
φ max	13.33	13.33	13.32	13.31	13.30	13.29	13.28
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.23	6.23	6.22	6.21	6.20	6.20	6.19

pH sensor properties

Dynamic range	pH 4.30 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.85-5.15; ± 0.1 pH at pH 5.15-7.10; ± 0.25 pH at pH 7.10-7.40 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_4 (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 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 Plate (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	2021-10-25

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DO calibration parameters Lot No.2112111 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.82	72.78	72.75	72.71	72.67	72.63	72.60
ϕ cal100	42.35	42.15	41.96	41.76	41.56	41.37	41.17

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.56	72.52	72.48	72.45	72.41	72.37	72.33
ϕ cal100	40.97	40.77	40.58	40.38	40.18	39.99	39.79

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.30	72.26	72.22	72.19	72.15	72.11	72.07
ϕ cal100	39.59	39.40	39.20	39.00	38.80	38.61	38.41

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 (t ₉₀)	< 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-1921-01_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 Plate (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	2021-10-25

Sterilization procedure

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

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