

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

pH calibration parameters Lot No.2108101 and 2108107 (BioLector® II/Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.72	63.65	63.58	63.51	63.44	63.37	63.30
φ max	13.33	13.33	13.33	13.33	13.33	13.33	13.33
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.28	6.27	6.27	6.26	6.26	6.25	6.24

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.23	63.16	63.09	63.02	62.95	62.88	62.82
φ max	13.33	13.33	13.34	13.34	13.34	13.34	13.34
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.56
pH ₀	6.24	6.23	6.22	6.22	6.21	6.21	6.20

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.75	62.68	62.61	62.54	62.47	62.40	62.33
φ max	13.34	13.34	13.34	13.34	13.34	13.34	13.34
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.19	6.19	6.18	6.17	6.17	6.16	6.16

pH sensor properties

Dynamic range	pH 4.30 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.80-5.10; ± 0.1 pH at pH 5.10-7.05; ± 0.25 pH at pH 7.05-7.35 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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2021-08-17

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DO calibration parameters Lot No.2108101 and 2108107 (BioLector® II/Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	73.06	73.00	72.94	72.88	72.82	72.76	72.70
φ cal100	44.08	43.85	43.63	43.41	43.18	42.96	42.73

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.64	72.58	72.52	72.46	72.40	72.34	72.29
φ cal100	42.51	42.29	42.06	41.84	41.61	41.39	41.17

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.23	72.17	72.11	72.05	71.99	71.93	71.87
φ cal100	40.94	40.72	40.49	40.27	40.05	39.82	39.60

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-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 = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.26 (DO Ser. 4103, gain 7)
Date of calibration	2021-08-17

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	911177
Date of sterilization	2021-06-24

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