

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

pH calibration parameters Lot No. 2014107 (BioLector® II, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.76	63.69	63.61	63.54	63.46	63.39	63.32
φ max	13.52	13.52	13.53	13.53	13.53	13.53	13.54
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.25	6.24	6.24	6.23	6.23	6.22	6.21
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.24	63.17	63.09	63.02	62.95	62.87	62.80
φ max	13.54	13.54	13.55	13.55	13.55	13.56	13.56
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.53
pH ₀	6.21	6.20	6.19	6.19	6.18	6.18	6.17
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.73	62.65	62.58	62.50	62.43	62.36	62.28
φ max	13.56	13.57	13.57	13.57	13.58	13.58	13.58
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.16	6.16	6.15	6.15	6.14	6.13	6.13

pH sensor properties

Dynamic range	pH 4.35 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.80 - 5.10; ± 0.1 pH at pH 5.10 – 7.00; ± 0.25 pH at pH 7.00 - 7.30 (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 = Round Plate (MTP-R48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.46 (pH Ser. 3111, gain 7)
Date of calibration	2021/01/19

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DO calibration parameters Lot No. 2014107 (BioLector® II, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.81	72.76	72.70	72.65	72.59	72.54	72.48
ϕ cal100	44.32	44.10	43.88	43.66	43.44	43.21	42.99
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.42	72.37	72.31	72.26	72.20	72.15	72.09
ϕ cal100	42.77	42.55	42.33	42.11	41.89	41.67	41.45
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.04	71.98	71.93	71.87	71.82	71.76	71.71
ϕ cal100	41.23	41.01	40.79	40.57	40.35	40.13	39.91

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 = Round Plate (MTP-R48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.26 (DO Ser.4103, gain 7)
Date of calibration	2021/01/19

Sterilization procedure

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

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