

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

pH calibration parameters Lot No.2114111 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.44	63.37	63.29	63.21	63.14	63.06	62.99
φ max	14.12	14.11	14.10	14.09	14.08	14.07	14.06
dpH	0.53	0.53	0.53	0.53	0.53	0.54	0.54
pH ₀	6.38	6.37	6.37	6.36	6.36	6.35	6.35

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.91	62.83	62.76	62.68	62.61	62.53	62.45
φ max	14.05	14.04	14.03	14.02	14.01	13.99	13.98
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.34	6.33	6.33	6.32	6.32	6.31	6.31

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.38	62.30	62.22	62.15	62.07	62.00	61.92
φ max	13.97	13.96	13.95	13.94	13.93	13.92	13.91
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.30	6.29	6.29	6.28	6.28	6.27	6.27

pH sensor properties

Dynamic range	pH 4.45 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.90-5.20; ± 0.1 pH at pH 5.20-7.15; ± 0.25 pH at pH 7.15-7.45 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_5 (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 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / 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	2021-10-21

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DO calibration parameters Lot No.2114111 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	73.01	72.96	72.91	72.86	72.82	72.77	72.72
ϕ cal100	42.89	42.70	42.51	42.32	42.13	41.94	41.75

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.67	72.62	72.57	72.52	72.48	72.43	72.38
ϕ cal100	41.56	41.37	41.18	40.99	40.80	40.61	40.42

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.33	72.28	72.23	72.18	72.13	72.09	72.04
ϕ cal100	40.23	40.04	39.85	39.66	39.47	39.28	39.09

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_2 (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	2021-10-21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	952124
Date of sterilization	2021-10-05

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