

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

pH calibration parameters Lot No. 1709 (BioLector® II/Pro, filter module ID-202)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	65.49	65.42	65.35	65.29	65.22	65.15	65.08
φ max	18.93	18.92	18.92	18.92	18.91	18.91	18.90
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.73	6.73	6.72	6.72	6.71	6.71	6.70
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	65.02	64.95	64.88	64.82	64.75	64.68	64.61
φ max	18.90	18.89	18.89	18.88	18.88	18.88	18.87
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.70	6.69	6.69	6.68	6.68	6.67	6.67
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	64.55	64.48	64.41	64.34	64.28	64.21	64.14
φ max	18.87	18.86	18.86	18.85	18.85	18.84	18.84
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.50
pH ₀	6.66	6.66	6.65	6.65	6.64	6.64	6.63

pH sensor properties

Dynamic range	pH 4.05 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.50 - 5.15; ± 0.1 pH at pH 5.15 - 7.70; ± 0.25 pH at pH 7.70 - 8.30 (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 HP8-1427-02_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 Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.180 (pH Ser.3111-RD, gain 7)
Date of calibration	2017/06/26

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DO calibration parameters Lot No. 1709 (BioLector® II/Pro, filter module ID-203)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.25	72.21	72.17	72.13	72.09	72.05	72.01
φ cal100	44.53	44.35	44.18	44.00	43.83	43.65	43.48
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.97	71.93	71.89	71.85	71.80	71.76	71.72
φ cal100	43.30	43.13	42.96	42.78	42.61	42.43	42.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.68	71.64	71.60	71.56	71.52	71.48	71.44
φ cal100	42.08	41.91	41.73	41.56	41.38	41.21	41.04

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-1426-03_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 = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.59 (DO Ser.4103-RD, gain 7)
Date of calibration	2017/06/26

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	380035
Date of sterilization	2017/06/13

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