

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

pH calibration parameters Lot No. 1605

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	42.03	41.99	41.96	41.92	41.89	41.86	41.82
ϕ max	15.78	15.77	15.75	15.74	15.73	15.72	15.71
dpH	0.55	0.55	0.55	0.55	0.54	0.54	0.54
pH ₀	4.35	4.34	4.34	4.33	4.32	4.32	4.31
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	41.79	41.75	41.72	41.68	41.65	41.62	41.58
ϕ max	15.70	15.68	15.67	15.66	15.65	15.64	15.63
dpH	0.54	0.54	0.53	0.53	0.53	0.53	0.53
pH ₀	4.30	4.30	4.29	4.28	4.28	4.27	4.26
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	41.55	41.51	41.48	41.44	41.41	41.38	41.34
ϕ max	15.62	15.60	15.59	15.58	15.57	15.56	15.55
dpH	0.52	0.52	0.52	0.52	0.52	0.51	0.51
pH ₀	4.26	4.25	4.25	4.24	4.23	4.23	4.22

pH sensor properties

Dynamic range	pH 2.25 – 5.75
Resolution	Up to 0.02 pH (software)
Accuracy	± 0.2 pH at pH 2.50 - 3.10; ± 0.1 pH at pH 3.10 – 4.95; ± 0.3 pH at pH 4.95 - 5.50 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 5.0	-0.03 pH per day (sampling interval of 15 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	sensor material can be destructed 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 low-pH-10_blau (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 1.00 ± 0.01 / pH 2.00 ± 0.01 / pH 7.00 ± 0.01 / pH 8.00 ± 0.01, 20 °C); 150 mM Citrate-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	BioLector CX_110335 (BL092)
Calibration phase offset	pH 255.5 (pH Ser.3083-hc, gain 32)
Date of calibration	2016/06/17

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DO calibration parameters Lot No. 1605

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	68.85	68.89	68.94	68.98	69.03	69.07	69.11
φ cal100	45.33	45.12	44.92	44.71	44.50	44.30	44.09
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.16	69.20	69.25	69.29	69.33	69.38	69.42
φ cal100	43.89	43.68	43.48	43.27	43.07	42.86	42.66
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.47	69.51	69.55	69.60	69.64	69.69	69.73
φ cal100	42.45	42.25	42.04	41.84	41.63	41.43	41.22

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % O ₂ (software)
Precision (CV)	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.03% O ₂ within 30 days (sampling interval of 1 min)
Response time (t90)	< 30 s
Temperature range	0 – 50°C
Sensor stability	sensor material can be destructed 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	BioLector CX_110335 (BL092)
Calibration phase offset	DO 332.4 (DO Ser.4084-hc, gain 42)
Date of calibration	2016/06/17

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	249885
Date of sterilization	2016/06/02

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