

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

pH calibration parameters Lot No. 1502

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	58.10	58.01	57.93	57.85	57.76	57.68	57.60
ϕ max	18.13	18.11	18.10	18.08	18.06	18.05	18.03
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.75	6.74	6.73	6.72	6.71	6.70	6.69
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	57.52	57.43	57.35	57.27	57.19	57.10	57.02
ϕ max	18.02	18.00	17.99	17.97	17.95	17.94	17.92
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.48
pH ₀	6.68	6.67	6.66	6.65	6.64	6.63	6.62
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	56.94	56.86	56.77	56.69	56.61	56.52	56.44
ϕ max	17.91	17.89	17.87	17.86	17.84	17.83	17.81
dpH	0.48	0.48	0.48	0.48	0.48	0.48	0.48
pH ₀	6.61	6.60	6.59	6.58	6.57	6.56	6.55

pH sensor properties

Dynamic range	pH 4.05 – 8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.1 pH at pH 4.60 – 5.40; ± 0.02 pH at pH 5.40 – 7.25; ± 0.2 pH at pH 7.25 - 8.10 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 1 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 HP8-1427-02 (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	BioLector CX_11035 (BL092)
Calibration phase offset	pH (pH Ser.30-hc, gain 30)
Date of calibration	201.5/03/05

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DO calibration parameters Lot No. 1502

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	63.57	63.75	63.93	64.12	64.30	64.49	64.67
ϕ cal100	42.51	42.29	42.08	41.87	41.66	41.45	41.23
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	64.86	65.04	65.22	65.41	65.59	65.78	65.96
ϕ cal100	41.02	40.81	40.60	40.39	40.17	39.96	39.75
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	66.15	66.33	66.52	66.70	66.88	67.07	67.25
ϕ cal100	39.54	39.33	39.11	38.90	38.69	38.48	38.27

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 (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 (nitrogen, 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_11035 (BL092)
Calibration phase offset	DO 332.4 (DO Ser.4084-hc, gain 40)
Date of calibration	2015/03/05

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	101767
Date of sterilization	2015/02/28

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