

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

pH calibration parameters Lot No. 1513

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	40.74	40.67	40.61	40.55	40.48	40.42	40.35
ϕ max	14.90	14.89	14.89	14.89	14.88	14.88	14.87
dpH	0.57	0.57	0.57	0.57	0.56	0.56	0.56
pH ₀	4.24	4.24	4.23	4.22	4.22	4.21	4.20
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	40.29	40.23	40.16	40.10	40.03	39.97	39.90
ϕ max	14.87	14.87	14.86	14.86	14.86	14.85	14.85
dpH	0.55	0.55	0.55	0.55	0.54	0.54	0.54
pH ₀	4.20	4.19	4.18	4.18	4.17	4.16	4.16
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	39.84	39.78	39.71	39.65	39.58	39.52	39.46
ϕ max	14.84	14.84	14.84	14.83	14.83	14.82	14.82
dpH	0.54	0.53	0.53	0.53	0.52	0.52	0.52
pH ₀	4.15	4.15	4.14	4.13	4.13	4.12	4.11

pH sensor properties

Dynamic range	pH 1.95 – 5.60
Resolution	Up to 0.02 pH (software)
Accuracy	± 0.2 pH at pH 2.25 – 2.95; ± 0.1 pH at pH 2.95– 4.60; ± 0.3 pH at pH 4.60 – 5.35 (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 30)
Date of calibration	2015/07/24

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DO calibration parameters Lot No. 1513

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.45	72.42	72.38	72.35	72.31	72.27	72.24
ϕ cal100	42.08	41.87	41.67	41.46	41.25	41.05	40.84
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.20	72.16	72.13	72.09	72.06	72.02	71.98
ϕ cal100	40.63	40.43	40.22	40.01	39.81	39.60	39.39
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.95	71.91	71.87	71.84	71.80	71.77	71.73
ϕ cal100	39.19	38.98	38.77	38.57	38.36	38.16	37.95

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_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 (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	BBioLector CX_110335(BL092)
Calibration phase offset	DO 332.4 (DO Ser.4084 -hc, gain 40)
Date of calibration	2015/07/24

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	146277
Date of sterilization	2015/07/16

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