

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

pH calibration parameters Lot No. 1312

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	58.13	58.05	57.96	57.88	57.80	57.71	57.63
ϕ max	16.12	16.11	16.09	16.07	16.05	16.03	16.02
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.75	6.73	6.72	6.71	6.70	6.69	6.68
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	57.55	57.46	57.38	57.29	57.21	57.13	57.04
ϕ max	16.00	15.98	15.96	15.95	15.93	15.91	15.89
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.67	6.66	6.65	6.64	6.63	6.62	6.61
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	56.96	56.87	56.79	56.71	56.62	56.54	56.45
ϕ max	15.87	15.86	15.84	15.82	15.80	15.79	15.77
dpH	0.49	0.49	0.49	0.49	0.49	0.49	0.49
pH ₀	6.60	6.59	6.58	6.57	6.56	6.55	6.54

pH sensor properties

Dynamic range	pH 4.05 - 8.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.1 pH at pH 4.60 - 5.40; ± 0.02 pH at pH 5.40 - 7.40; ± 0.2 pH at pH 7.40 - 8.15 (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 HP8-1329-01 (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_020305 (BL004)
Calibration phase offset	pH 255.3 (pH Ser.3020-hc, gain 25)
Date of calibration	2013/10/31

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DO calibration parameters Lot No. 1312

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.34	72.40	72.45	72.51	72.56	72.62	72.67
ϕ cal100	46.88	46.62	46.35	46.09	45.83	45.57	45.31
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.73	72.79	72.84	72.90	72.95	73.01	73.06
ϕ cal100	45.04	44.78	44.52	44.26	44.00	43.73	43.47
Temperature	34°C	345C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	73.12	73.17	73.23	73.28	73.34	73.39	73.45
ϕ cal100	43.21	42.95	42.69	42.42	42.16	41.90	41.64

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	< 0.03% 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-1326-02 (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_020305 (BL004)
Calibration phase offset	DO 332.2 (DO Ser.4020-hc, gain 60)
Date of calibration	2013/10/31

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	33115271
Date of sterilization	2013/10/28

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EUROPE

m2p-labs GmbH
Arnold-Sommerfeld-Ring 2 | 52499 Baesweiler | Germany
Phone +49-2401-805-330 | Fax: +49-2401-805-333
info@m2p-labs.com | support@m2p-labs.com

USA

m2p-labs, Inc.
400 Oser Ave, Suite 1650 | Hauppauge, NY 11788 | USA
Phone +1-631-501-1878 | Fax +1-631-501-1060
infoUS@m2p-labs.com | supportUS@m2p-labs.com