

DASGIP BioLector

Calibration Data Sheet for *pH & DO optodes*

Please enter these **calibration parameters** and the **Lot.-No.** in the BioLector software!

Lot.-No.: 1016

Filter: HC

Date of execution: 2011/03/29

pH calibration parameters

Buffer	150 mM Na-Phosphate buffer, <i>CertiPUR</i> buffer pH 4.01 (25°C), <i>CertiPUR</i> buffer pH 10.00 (25°C) (18 point calibration)						
Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	56.25	56.19	56.14	56.08	56.03	55.98	55.92
φ max	21.99	21.98	21.96	21.95	21.93	21.92	21.90
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pHo	6.62	6.61	6.60	6.59	6.58	6.56	6.55
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	55.87	55.82	55.76	55.71	55.66	55.60	55.55
φ max	21.89	21.87	21.86	21.84	21.83	21.81	21.80
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pHo	6.54	6.53	6.52	6.51	6.49	6.48	6.47
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	55.50	55.44	55.39	55.34	55.28	55.23	55.18
φ max	21.78	21.77	21.75	21.74	21.72	21.71	21.69
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pHo	6.46	6.45	6.43	6.42	6.41	6.40	6.39

Sensor properties

Dynamic range	pH 5.0-8.5
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.10 pH (pH 5-7.5); ± 0.25 pH (> pH 7.5) (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. 10% v/v)
Cross-sensitivity	Reduced to ionic strength (salinity); a high concentration of fluorescent molecules in the visible range can interfere
Basic material	pH sensor HP8-1017-04

Calibration

Buffer	CertiPUR Reference Material Buffer solutions Set 2 Lot No.: HC701006 (pH 4.01 ± 0.015 / pH 10.00 ± 0.03, 25°C); 150 mM Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40°C, 1000 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flowerplate (MTP-48-BOH)
Calibration device	BioLector CX_05B838(BL007)
Calibration phase offset	pH 255.6 (pH Ser.3010-hc)

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DO calibration parameters

Buffer	Sulfite system						
Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.62	72.73	72.85	72.97	73.08	73.20	73.32
φ cal100	47.21	47.01	46.80	46.60	46.40	46.20	46.00
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.44	73.55	73.67	73.79	73.90	74.02	74.14
φ cal100	45.79	45.59	45.39	45.19	44.98	44.78	44.58
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	74.26	74.37	74.49	74.61	74.72	74.84	74.96
φ cal100	44.38	44.17	43.97	43.77	43.57	43.36	43.16

Sensor properties

Dynamic range	0-100% air saturation (a.s.)
Resolution	Up to 0.1% O ₂ (software)
Accuracy	± 2% 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
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride Chlorine gas
Basic material	Oxygen sensor PSt3-HG1006-01

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, 1000 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flowerplate (MTP-48-BOH)
Calibration device	BioLector CX_05B838(BL007)
Calibration phase offset	DO 332.4 (DO Ser.4010-hc)

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	30113746
Date of sterilization	2010/10/01