DASGIP BioLector

Calibration Data Sheet for *pH & DO optodes*

BioLector Calibration Data

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

Lot.-No.: 1116
Filter: STD

Date of calibration: 2011/10/24

pH calibration parameters

Buffer	150 mM Na-Phosphate buffer, *CertiPUR* buffer: pH 3.00, pH 4.01, pH 9.00, pH 10.00 (25°C) (20 point calibration)						
Temperature	**20°C**	**21°C**	**22°C**	**23°C**	**24°C**	**25°C**	**26°C**
ϕ min	54.43	54.35	54.28	54.20	54.13	54.06	53.98
ϕ max	14.57	14.55	14.53	14.51	14.49	14.47	14.45
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pHo	5.97	5.97	5.96	5.96	5.95	5.95	5.94
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	53.91	53.84	53.76	53.69	53.62	53.54	53.47
ϕ max	14.43	14.40	14.38	14.36	14.34	14.32	14.30
dpH	0.58	0.57	0.57	0.57	0.57	0.57	0.57
pHo	5.94	5.93	5.93	5.92	5.92	5.91	5.91
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	53.39	53.32	53.25	53.17	53.10	53.03	52.95
ϕ max	14.28	14.26	14.24	14.22	14.19	14.17	14.15
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pHo	5.90	5.90	5.89	5.89	5.89	5.88	5.88

Sensor properties

Dynamic range	pH 4.00 - 8.25
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.01 pH at pH 4.80 - 6.70); ± 0.1 pH at > pH 6.70 - 7.65 & < pH 4.80 - 4.00 (batch calibration)
Response time (t90)	At 25°C < 30s
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 HP8-1125-01

Calibration

Buffer	CertiPUR Reference Material Buffer solutions Set (pH 3.00 ± 0.01 / pH 4.01 ± 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_05B82F (BL010)
Calibration phase offset	pH 255.6 (pH Ser.0086, gain 50)

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Lot.-No.: 1116
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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	74.13	74.15	74.16	74.17	74.18	74.19	74.20
ϕ cal100	45.10	44.91	44.72	44.53	44.34	44.14	43.95
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	74.21	74.22	74.24	74.25	74.26	74.27	74.28
ϕ cal100	43.76	43.57	43.38	43.18	42.99	42.80	42.61
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	74.29	74.30	73.31	74.33	74.34	74.35	74.36
ϕ cal100	42.41	42.22	42.03	41.84	41.65	41.45	41.26

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)	< 30s
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-HG-1113-01

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, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flowerplate (MTP-48-BOH)
Calibration device	BioLector CX_05B82F (BL010)
Calibration phase offset	DO 332.1 (DO Ser.0164, gain 55)

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	31113563
Date of sterilization	2011/10/09

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