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

pH calibration parameters Lot No. 1518

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	58.10	58.02	57.94	57.87	57.79	57.71	57.64
ϕ max	18.00	17.97	17.94	17.91	17.88	17.85	17.82
dpH	0.51	0.50	0.50	0.50	0.50	0.50	0.50
pH_0	6.79	6.78	6.76	6.75	6.74	6.73	6.72
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	57.56	57.48	57.41	57.33	57.25	57.18	57.10
ϕ max	17.79	17.76	17.74	17.71	17.68	17.65	17.62
dpH	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH_0	6.71	6.70	6.69	6.67	6.66	6.65	6.64
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	57.02	56.95	56.87	56.79	56.72	56.64	56.56
ϕ max	17.59	17.56	17.53	17.50	17.47	17.44	17.41
dpH	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH_0	6.63	6.62	6.61	6.60	6.58	6.57	6.56

pH sensor properties

Dynamic range	pH 4.10 - 8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.1 pH at pH 4.70 - 5.60; ± 0.02 pH at pH 5.60 – 7.30; ± 0.2 pH at pH 7.30 - 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 HP8-1427-02_2 (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_110335 (BL092)
Calibration phase offset	pH 255.5 (pH Ser.3083-hc, gain 30)
Date of calibration	2016/01/05

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

DO calibration parameters Lot No. 1518

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	65.85	65.97	66.10	66.23	66.36	66.48	66.61
ϕ cal100	44.85	44.62	44.39	44.16	43.93	43.70	43.47
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	66.74	66.87	66.99	67.12	67.25	67.38	67.51
ϕ cal100	43.24	43.01	42.79	42.56	42.33	42.10	41.87
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	67.63	67.76	67.89	68.02	68.14	68.27	68.40
ϕ cal100	41.64	41.41	41.18	40.95	40.72	40.49	40.27

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % 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	BioLector CX_110335 (BL092)
Calibration phase offset	DO 332.4 (DO Ser.4084-hc, gain 40)
Date of calibration	2016/01/05

Sterilization procedure

Sterilization	Gamma irradiation (15 kGy)
BGS-certificate No	196036
Date of sterilization	2015/12/12

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