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

pH calibration parameters Lot No. 1944 (BioLector® I, filter module ID-102/-302)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	56.83	56.74	56.66	56.58	56.49	56.41	56.32
ϕ max	13.15	13.14	13.12	13.11	13.10	13.08	13.07
dpH	0.52	0.52	0.53	0.53	0.53	0.53	0.53
pH_0	6.31	6.30	6.29	6.29	6.28	6.27	6.27
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	56.24	56.15	56.07	55.98	55.90	55.81	55.73
ϕ max	13.05	13.04	13.02	13.01	12.99	12.98	12.96
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH_0	6.26	6.25	6.25	6.24	6.23	6.23	6.22
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	55.64	55.56	55.47	55.39	55.30	55.22	55.14
ϕ max	12.95	12.94	12.92	12.91	12.89	12.88	12.86
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH_0	6.21	6.21	6.20	6.19	6.19	6.18	6.17

pH sensor properties

Dynamic range	pH 4.40 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.90 - 5.20; ± 0.1 pH at pH 5.20 – 6.95; ± 0.25 pH at pH 6.95 - 7.30 (batch calibration)
Response time (t90)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 6 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	sensor material can be degraded 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 HP8-1811-01_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-BOH1)
Calibration device	BioLector CX_110335 (BL092)
Calibration phase offset	pH 255.5 (pH Ser.3083-hc, gain 45)
Date of calibration	2019/12/03

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

DO calibration parameters Lot No. XXXX (BioLector® I, filter module ID-103/303)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	72.96	72.93	72.90	72.87	72.84	72.81	72.79
ϕ cal100	44.72	44.49	44.27	44.05	43.83	43.61	43.39
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	72.76	72.73	72.70	72.67	72.64	72.62	72.59
ϕ cal100	43.17	42.95	42.73	42.51	42.29	42.07	41.85
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	72.56	72.53	72.50	72.47	72.45	72.42	72.39
ϕ cal100	41.62	41.40	41.18	40.96	40.74	40.52	40.30

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	< 0.5% O_2 per day (sampling interval of 6 min)
Response time (t90)	< 30 s
Temperature range	5 – 50°C
Sensor stability	sensor material can be degraded 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-1810-01_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 (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-BOH1)
Calibration device	BioLector CX_110335 (BL092)
Calibration phase offset	DO 332.4 (DO Ser.4084-hc, gain 48)
Date of calibration	2019/12/03

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	688736
Date of sterilization	2019/10/30

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