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

pH calibration parameters Lot No. 1836 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.84	69.72	69.59	69.47	69.34	69.22	69.10
ϕ max	12.40	12.29	12.18	12.07	11.97	11.86	11.75
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH_0	6.29	6.28	6.27	6.26	6.26	6.25	6.24
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	68.97	68.85	68.73	68.60	68.48	68.36	68.23
ϕ max	11.64	11.53	11.42	11.31	11.21	11.10	10.99
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH_0	6.23	6.23	6.22	6.21	6.20	6.19	6.19
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	68.11	67.99	67.86	67.74	67.62	67.49	67.37
ϕ max	10.88	10.77	10.66	10.55	10.45	10.34	10.23
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH_0	6.18	6.17	6.16	6.16	6.15	6.14	6.13

pH sensor properties

Dynamic range	pH 2.40 - 8.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.30 - 4.70; ± 0.1 pH at pH 4.70 – 6.85; ± 0.25 pH at pH 6.85 - 8.15 (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 LG1-1737-01 (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 1.00 ± 0.01 / pH 2.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.31 (pH Ser.3188-RD, gain 8)
Date of calibration	2018/09/24

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

DO calibration parameters Lot No. 1836 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	69.06	69.03	69.01	68.98	68.96	68.93	68.91
ϕ cal100	43.68	43.46	43.23	43.00	42.78	42.55	42.33
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	68.88	68.86	68.84	68.81	68.79	68.76	68.74
ϕ cal100	42.10	41.88	41.65	41.42	41.20	40.97	40.75
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	68.71	68.69	68.66	68.64	68.62	68.59	68.57
ϕ cal100	40.52	40.29	40.07	39.84	39.62	39.39	39.16

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	< 0.5% 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 RF-03/2018 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = FlowerPlate (MTP-48-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.39 (DO Ser.4170-RD, gain 4)
Date of calibration	2018/09/24

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Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	545116
Date of sterilization	2018/09/17

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