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

pH calibration parameters Lot No. 2007202 (BioLector® II/Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.04	68.97	68.90	68.83	68.77	68.70	68.63
ϕ max	10.51	10.46	10.41	10.36	10.31	10.26	10.21
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH_0	6.21	6.20	6.19	6.18	6.17	6.16	6.15
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	68.56	68.49	68.42	68.35	68.28	68.21	68.14
ϕ max	10.16	10.11	10.06	10.00	9.95	9.90	9.85
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH_0	6.14	6.13	6.12	6.11	6.10	6.09	6.08
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	68.07	68.00	67.93	67.87	67.80	67.73	67.66
ϕ max	9.80	9.75	9.70	9.65	9.60	9.55	9.50
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.68
pH_0	6.07	6.06	6.05	6.04	6.03	6.02	6.01

pH sensor properties

Dynamic range	pH 3.80 – 8.05
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.45 – 4.85; ± 0.1 pH at pH 4.85 – 7.05; ± 0.25 pH at pH 7.05 – 7.45 (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 LG1-1840-01 (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 2.00 ± 0.01 / pH 3.00 ± 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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.15 (pH Ser. 3305, gain 8)
Date of calibration	2020/08/06

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

DO calibration parameters Lot No. 2007202 (BioLector® II/Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.94	70.92	70.91	70.89	70.88	70.86	70.85
ϕ cal100	43.08	42.89	42.70	42.51	42.32	42.13	41.95
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	70.83	70.82	70.80	70.79	70.77	70.76	70.74
ϕ cal100	41.76	41.57	41.38	41.19	41.00	40.81	40.62
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	70.73	70.71	70.70	70.68	70.67	70.65	70.64
ϕ cal100	40.43	40.24	40.05	39.86	39.67	39.48	39.29

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-m2p-A 200950183 (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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser.4302-RD, gain 4)
Date of calibration	2020/08/06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	787233
Date of sterilization	2020/07/30

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