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

pH calibration parameters Lot No. 2012201 and 2012207 (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	70.46	70.39	70.31	70.24	70.17	70.09	70.02
ϕ max	14.78	14.72	14.65	14.58	14.52	14.45	14.39
dpH	0.82	0.82	0.82	0.82	0.82	0.82	0.82
pH_0	6.75	6.74	6.73	6.72	6.71	6.70	6.69
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ min	69.94	69.87	69.80	69.72	69.65	69.58	69.50
ϕ max	14.32	14.25	14.19	14.12	14.06	13.99	13.92
dpH	0.82	0.82	0.82	0.81	0.81	0.81	0.81
pH_0	6.68	6.67	6.66	6.65	6.64	6.63	6.62
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ min	69.43	69.35	69.28	69.21	69.13	69.06	68.99
ϕ max	13.86	13.79	13.73	13.66	13.59	13.53	13.46
dpH	0.81	0.81	0.81	0.81	0.81	0.81	0.81
pH_0	6.61	6.61	6.60	6.59	6.58	6.57	6.56

pH sensor properties

Dynamic range	pH 4.1 - 8.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.85 - 5.35; ± 0.1 pH at pH 5.35 - 7.6; ± 0.25 pH at pH 7.6 - 8.1 (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 LG1-1939-01_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 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 -360.149994 (pH Ser. 3305, gain 8)
Date of calibration	2021/01/14

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

DO calibration parameters Lot No. 2012201 and 2012207 (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	70.57	70.56	70.55	70.55	70.54	70.53	70.53
ϕ cal100	42.79	42.60	42.40	42.20	42.00	41.80	41.60
Temperature	**27°C**	**28°C**	**29°C**	**30°C**	**31°C**	**32°C**	**33°C**
ϕ cal0	70.52	70.51	70.51	70.50	70.50	70.49	70.48
ϕ cal100	41.41	41.21	41.01	40.81	40.61	40.41	40.22
Temperature	**34°C**	**35°C**	**36°C**	**37°C**	**38°C**	**39°C**	**40°C**
ϕ cal0	70.48	70.47	70.46	70.46	70.45	70.45	70.44
ϕ cal100	40.02	39.82	39.62	39.42	39.22	39.03	38.83

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 204150647 (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 -360.440002 (DO Ser.4302-RD, gain 4)
Date of calibration	2021/01/14

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	840289
Date of sterilization	2020/12/17

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