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

pH calibration parameters Lot No.2115221 (BioLector® XT, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.63	67.54	67.44	67.35	67.26	67.17	67.08
ϕ max	12.24	12.16	12.09	12.02	11.95	11.88	11.80
dpH	0.78	0.78	0.78	0.78	0.78	0.78	0.78
pH_0	6.60	6.59	6.57	6.56	6.55	6.54	6.53

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	66.98	66.89	66.80	66.71	66.62	66.52	66.43
ϕ max	11.73	11.66	11.59	11.52	11.44	11.37	11.30
dpH	0.78	0.78	0.78	0.77	0.77	0.77	0.77
pH_0	6.52	6.51	6.50	6.48	6.47	6.46	6.45

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.34	66.25	66.16	66.06	65.97	65.88	65.79
ϕ max	11.23	11.16	11.08	11.01	10.94	10.87	10.80
dpH	0.77	0.77	0.77	0.77	0.77	0.76	0.76
pH_0	6.44	6.43	6.42	6.40	6.39	6.38	6.37

pH sensor properties

Dynamic range	pH 3.90 - 8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 5.15 ; ± 0.1 pH at pH 5.15 - 7.45 ; ± 0.25 pH at pH 7.45 - 7.90 (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 ± 0.02 / pH 3.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.45 (pH Ser. 3513, gain 8)
Date of calibration	2021-11-10

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

DO calibration parameters Lot No.2115221 (BioLector® XT, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1697	-1665	-1633	-1601	-1569	-1537	-1505
B	13073	12823	12572	12321	12071	11820	11570
C	-11547	-11320	-11093	-10867	-10640	-10414	-10187

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1473	-1441	-1410	-1378	-1346	-1314	-1282
B	11319	11069	10818	10567	10317	10066	9816
C	-9961	-9734	-9507	-9281	-9054	-8828	-8601

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1250	-1218	-1186	-1154	-1123	-1091	-1059
B	9565	9315	9064	8813	8563	8312	8062
C	-8374	-8148	-7921	-7695	-7468	-7241	-7015

DO sensor properties

Dynamic range	0 - 100 % oxygen
Resolution	Up to 0.1 % O2 (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O2 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-21160296 (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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.45 (DO Ser. 4452, gain 4)
Date of calibration	2021-11-10

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	963394
Date of sterilization	2021-11-03

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