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

pH calibration parameters Lot No.2111211 and 2111217 (BioLector® XT, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.74	69.65	69.57	69.48	69.39	69.31	69.22
ϕ max	12.17	12.08	12.00	11.92	11.83	11.75	11.67
dpH	0.83	0.83	0.83	0.83	0.82	0.82	0.82
pH_0	6.66	6.65	6.64	6.63	6.62	6.61	6.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	69.13	69.05	68.96	68.88	68.79	68.70	68.62
ϕ max	11.59	11.50	11.42	11.34	11.25	11.17	11.09
dpH	0.82	0.82	0.82	0.82	0.82	0.82	0.82
pH_0	6.59	6.59	6.58	6.57	6.56	6.55	6.54

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	68.53	68.44	68.36	68.27	68.18	68.10	68.01
ϕ max	11.00	10.92	10.84	10.75	10.67	10.59	10.50
dpH	0.82	0.82	0.82	0.82	0.82	0.82	0.82
pH_0	6.53	6.52	6.51	6.50	6.49	6.48	6.47

pH sensor properties

Dynamic range	pH 3.75 - 8.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.60 - 5.10 ; ± 0.1 pH at pH 5.10 - 7.65 ; ± 0.25 pH at pH 7.65 - 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 LG1-1939-01_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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: 03166164
Calibration phase offset	pH -360.45 (pH Ser. 3513, gain 8)
Date of calibration	2021-08-11

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

DO calibration parameters Lot No.2111211 and 2111217 (BioLector® XT, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1874	-1841	-1808	-1775	-1742	-1709	-1676
B	14456	14197	13938	13678	13419	13160	12901
C	-12781	-12547	-12313	-12079	-11845	-11611	-11377

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1643	-1610	-1577	-1544	-1511	-1478	-1445
B	12642	12383	12124	11865	11605	11346	11087
C	-11143	-10909	-10675	-10441	-10207	-9973	-9739

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1412	-1379	-1346	-1313	-1280	-1247	-1214
B	10828	10569	10310	10051	9792	9533	9273
C	-9505	-9271	-9037	-8803	-8569	-8335	-8101

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-210250003 (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-MF32-BOH2)
Calibration device	Hardware ID: 03166164
Calibration phase offset	DO -360.45 (DO Ser. 4452, gain 4)
Date of calibration	2021-08-11

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	928111
Date of sterilization	2021-08-05

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