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

pH calibration parameters Lot No.2109321+2109327 (BioLector® XT, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.07	63.30	63.53	63.77	64.00	64.23	64.46
ϕ max	9.44	9.47	9.50	9.52	9.55	9.58	9.61
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH_0	5.50	5.50	5.49	5.49	5.49	5.48	5.48

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.69	64.92	65.16	65.39	65.62	65.85	66.08
ϕ max	9.64	9.67	9.70	9.73	9.76	9.78	9.81
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH_0	5.48	5.47	5.47	5.47	5.46	5.46	5.46

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.31	66.54	66.78	67.01	67.24	67.47	67.70
ϕ max	9.84	9.87	9.90	9.93	9.96	9.99	10.02
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH_0	5.45	5.45	5.45	5.44	5.44	5.44	5.43

pH sensor properties

Dynamic range	pH 3.95 - 6.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.50 ; ± 0.1 pH at pH 4.50 - 6.25 ; ± 0.25 pH at pH 6.25 - 6.40 (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 pH51-200950179 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: 03166164
Calibration phase offset	pH -360.99 (pH Ser. 3587, gain 6)
Date of calibration	2021-11-17

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

DO calibration parameters Lot No.2109321+2109327 (BioLector® XT, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-2390	-2349	-2308	-2268	-2227	-2186	-2145
B	18586	18266	17945	17625	17305	16984	16664
C	-16603	-16313	-16024	-15734	-15444	-15155	-14865

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-2104	-2064	-2023	-1982	-1941	-1901	-1860
B	16344	16023	15703	15383	15062	14742	14422
C	-14575	-14286	-13996	-13706	-13417	-13127	-12837

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1819	-1778	-1737	-1697	-1656	-1615	-1574
B	14101	13781	13461	13141	12820	12500	12180
C	-12548	-12258	-11968	-11679	-11389	-11099	-10810

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-210250002 (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_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: 03166164
Calibration phase offset	DO -360.99 (DO Ser. 4452, gain 4)
Date of calibration	2021-11-17

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	911184
Date of sterilization	2021-06-24

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