

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

pH calibration parameters Lot No.2115121 (BioLector® XT, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.40	64.31	64.23	64.14	64.06	63.97	63.89
φ max	13.67	13.67	13.67	13.67	13.67	13.68	13.68
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.31	6.30	6.29	6.28	6.27	6.26	6.25

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.81	63.72	63.64	63.55	63.47	63.39	63.30
φ max	13.68	13.68	13.68	13.68	13.68	13.68	13.68
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.24	6.23	6.22	6.21	6.20	6.19	6.18

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.22	63.13	63.05	62.97	62.88	62.80	62.71
φ max	13.68	13.68	13.68	13.68	13.68	13.69	13.69
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.17	6.16	6.15	6.14	6.14	6.13	6.12

pH sensor properties

Dynamic range	pH 4.25 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 - 5.10 ; ± 0.1 pH at pH 5.10 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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 HP8-1811-01_5 (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 3.00 ± 0.02 / pH 4.00 ± 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_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -1.81 (pH Ser. 3511, gain 7)
Date of calibration	2021-11-12

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DO calibration parameters Lot No.2115121 (BioLector® XT, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-3709	-3639	-3569	-3499	-3429	-3359	-3289
B	29171	28617	28063	27509	26955	26400	25846
C	-26398	-25892	-25387	-24881	-24376	-23870	-23365

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3219	-3149	-3079	-3009	-2939	-2869	-2799
B	25292	24738	24183	23629	23075	22521	21967
C	-22859	-22354	-21848	-21343	-20837	-20331	-19826

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-2729	-2659	-2589	-2520	-2450	-2380	-2310
B	21412	20858	20304	19750	19195	18641	18087
C	-19320	-18815	-18309	-17804	-17298	-16793	-16287

DO sensor properties

Dynamic range	0 - 100 % oxygen
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 (t ₉₀)	< 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 Pst3-HG-1921-01_2 (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_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -1.81 (DO Ser. 4446, gain 7)
Date of calibration	2021-11-12

Sterilization procedure

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

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