

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

pH calibration parameters Lot No.2213201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.35	69.25	69.16	69.07	68.97	68.88	68.78
φ max	21.98	21.90	21.81	21.73	21.65	21.57	21.48
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.90	5.89	5.88	5.87	5.85	5.84	5.83

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.69	68.59	68.50	68.40	68.31	68.22	68.12
φ max	21.40	21.32	21.24	21.15	21.07	20.99	20.91
dpH	0.70	0.70	0.70	0.69	0.69	0.69	0.69
pH ₀	5.82	5.80	5.79	5.78	5.77	5.75	5.74

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.03	67.93	67.84	67.74	67.65	67.56	67.46
φ max	20.82	20.74	20.66	20.58	20.49	20.41	20.33
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.73	5.72	5.70	5.69	5.68	5.67	5.65

pH sensor properties

Dynamic range	pH 3.55 - 7.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.55 ; ± 0.25 pH at pH 6.55 - 7.00 (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 LG1-2212-01 (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 = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-10-10

Contact us

- If you have any questions, contact Beckman Coulter Customer Support Center:
- Worldwide, find out in our website at: www.beckman.de/support/technical
 - In the USA and Canada, call us at 1-800-369-0333
 - Outside the USA and Canada, contact your local Beckman Coulter representative

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DO calibration parameters Lot No.2213201 and 2213281 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1548	-1521	-1494	-1467	-1440	-1413	-1386
B	11860	11651	11441	11231	11021	10812	10602
C	-10406	-10218	-10030	-9842	-9654	-9467	-9279

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1359	-1333	-1306	-1279	-1252	-1225	-1198
B	10392	10183	9973	9763	9553	9344	9134
C	-9091	-8903	-8715	-8527	-8340	-8152	-7964

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1171	-1144	-1117	-1090	-1064	-1037	-1010
B	8924	8715	8505	8295	8086	7876	7666
C	-7776	-7588	-7400	-7212	-7025	-6837	-6649

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 RF-222756995 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Three-point calibration at an oxygen-free environment (1.0 M sulfite system), an air-saturated environment (21% oxygen) and a pure (100%) oxygen environment (latter two with QC buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-10-10

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1085201
Date of sterilization	2022-09-27

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