

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

pH calibration parameters Lot No.2210201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.85	71.77	71.69	71.61	71.53	71.45	71.37
φ max	23.56	23.49	23.43	23.37	23.31	23.25	23.18
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.03	6.02	6.01	6.00	5.98	5.97	5.96

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.29	71.21	71.13	71.06	70.98	70.90	70.82
φ max	23.12	23.06	23.00	22.93	22.87	22.81	22.75
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.95	5.94	5.93	5.92	5.91	5.89	5.88

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.74	70.66	70.58	70.50	70.42	70.34	70.26
φ max	22.68	22.62	22.56	22.50	22.43	22.37	22.31
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.87	5.86	5.85	5.84	5.83	5.81	5.80

pH sensor properties

Dynamic range	pH 3.95 - 8.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 5.10 ; ± 0.1 pH at pH 5.10 - 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 LG1-2141-01 (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	2022-09-01

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.2210201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1863	-1825	-1788	-1751	-1714	-1677	-1640
B	14365	14073	13781	13488	13196	12904	12612
C	-12705	-12441	-12176	-11912	-11647	-11383	-11118

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1602	-1565	-1528	-1491	-1454	-1417	-1379
B	12319	12027	11735	11443	11150	10858	10566
C	-10854	-10589	-10325	-10060	-9795	-9531	-9266

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1342	-1305	-1268	-1231	-1194	-1156	-1119
B	10274	9981	9689	9397	9105	8812	8520
C	-9002	-8737	-8473	-8208	-7944	-7679	-7415

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 (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-221155397 (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	2022-09-01

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

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