

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

pH calibration parameters Lot No.2307201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.30	72.20	72.11	72.01	71.92	71.83	71.73
φ max	25.37	25.26	25.15	25.03	24.92	24.81	24.70
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.88	5.87	5.86	5.85	5.84	5.83	5.82

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.64	71.54	71.45	71.35	71.26	71.16	71.07
φ max	24.59	24.48	24.37	24.26	24.14	24.03	23.92
dpH	0.67	0.67	0.67	0.68	0.68	0.68	0.68
pH ₀	5.82	5.81	5.80	5.79	5.78	5.77	5.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.98	70.88	70.79	70.69	70.60	70.50	70.41
φ max	23.81	23.70	23.59	23.48	23.36	23.25	23.14
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH ₀	5.75	5.74	5.73	5.72	5.71	5.71	5.70

pH sensor properties

Dynamic range	pH 3.60 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.60 ; ± 0.25 pH at pH 6.60 - 7.10 (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 LG1-2239-02 (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 -360.53 (pH Ser. 3513, gain 8)
Date of calibration	2023-04-28

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.2307201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1828	-1795	-1763	-1730	-1698	-1665	-1633
B	14064	13811	13557	13304	13051	12798	12544
C	-12408	-12180	-11953	-11725	-11497	-11270	-11042

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1601	-1568	-1536	-1503	-1471	-1438	-1406
B	12291	12038	11784	11531	11278	11025	10771
C	-10815	-10587	-10360	-10132	-9905	-9677	-9450

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1374	-1341	-1309	-1276	-1244	-1212	-1179
B	10518	10265	10011	9758	9505	9251	8998
C	-9222	-8995	-8767	-8540	-8312	-8084	-7857

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-230250058+59 (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 -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2023-04-28

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3664
Date of sterilization	2023-04-18

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