

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

pH calibration parameters Lot No.2305202 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.34	71.25	71.17	71.08	70.99	70.90	70.82
φ max	25.31	25.21	25.11	25.01	24.91	24.82	24.72
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.84	5.83	5.82	5.81	5.80	5.79	5.77

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.73	70.64	70.55	70.47	70.38	70.29	70.20
φ max	24.62	24.52	24.42	24.32	24.22	24.12	24.02
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.76	5.75	5.74	5.73	5.72	5.71	5.70

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.12	70.03	69.94	69.85	69.77	69.68	69.59
φ max	23.92	23.82	23.72	23.62	23.53	23.43	23.33
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.69	5.68	5.67	5.66	5.65	5.64	5.63

pH sensor properties

Dynamic range	pH 3.60 - 7.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.50 ; ± 0.25 pH at pH 6.50 - 6.95 (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	2023-03-30

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.2305202 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1719	-1684	-1649	-1614	-1579	-1544	-1509
B	13196	12922	12647	12372	12098	11823	11548
C	-11610	-11362	-11113	-10865	-10617	-10369	-10121

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1474	-1439	-1404	-1369	-1334	-1299	-1264
B	11273	10999	10724	10449	10174	9900	9625
C	-9872	-9624	-9376	-9128	-8880	-8632	-8383

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1229	-1194	-1159	-1124	-1089	-1054	-1019
B	9350	9075	8801	8526	8251	7977	7702
C	-8135	-7887	-7639	-7391	-7142	-6894	-6646

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 (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	2023-03-30

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3541
Date of sterilization	2023-03-22

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