

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

pH calibration parameters Lot No.2305201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.32	71.21	71.10	70.99	70.89	70.78	70.67
φ max	23.00	22.91	22.82	22.73	22.64	22.55	22.46
dpH	0.69	0.69	0.69	0.69	0.69	0.70	0.70
pH ₀	5.79	5.78	5.77	5.76	5.75	5.74	5.73

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.56	70.46	70.35	70.24	70.14	70.03	69.92
φ max	22.37	22.28	22.19	22.10	22.01	21.92	21.83
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.72	5.71	5.70	5.69	5.68	5.67	5.66

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.81	69.71	69.60	69.49	69.38	69.28	69.17
φ max	21.74	21.65	21.56	21.46	21.37	21.28	21.19
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.66	5.65	5.64	5.63	5.62	5.61	5.60

pH sensor properties

Dynamic range	pH 3.45 - 7.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.10 - 4.60 ; ± 0.1 pH at pH 4.60 - 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	2023-03-29

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.2305201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1758	-1723	-1688	-1652	-1617	-1582	-1547
B	13521	13244	12967	12691	12414	12137	11860
C	-11918	-11667	-11417	-11166	-10916	-10666	-10415

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1512	-1476	-1441	-1406	-1371	-1336	-1301
B	11584	11307	11030	10753	10477	10200	9923
C	-10165	-9914	-9664	-9413	-9163	-8912	-8662

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1265	-1230	-1195	-1160	-1125	-1089	-1054
B	9646	9370	9093	8816	8539	8263	7986
C	-8411	-8161	-7910	-7660	-7409	-7159	-6908

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-230250059 (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	2023-03-29

Sterilization procedure

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

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