

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

pH calibration parameters Lot No.2310221 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.03	70.91	70.78	70.65	70.52	70.40	70.27
φ max	23.13	23.00	22.88	22.75	22.62	22.49	22.37
dpH	0.66	0.66	0.66	0.66	0.66	0.67	0.67
pH ₀	5.92	5.91	5.89	5.88	5.86	5.85	5.83

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.14	70.02	69.89	69.76	69.63	69.51	69.38
φ max	22.24	22.11	21.98	21.86	21.73	21.60	21.47
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.81	5.80	5.78	5.77	5.75	5.74	5.72

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.25	69.13	69.00	68.87	68.74	68.62	68.49
φ max	21.35	21.22	21.09	20.96	20.84	20.71	20.58
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.71	5.69	5.67	5.66	5.64	5.63	5.61

pH sensor properties

Dynamic range	pH 3.60 - 7.65
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 LG1-2239-02 (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 = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03624969 (BLXT Pilot 7)
Calibration phase offset	pH -360.53 (pH Ser. 3513, gain 8)
Date of calibration	2024-06-28

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

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

DO calibration parameters Lot No.2310221 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1818	-1778	-1737	-1696	-1656	-1615	-1574
B	14000	13681	13362	13043	12723	12404	12085
C	-12356	-12067	-11779	-11490	-11202	-10913	-10624

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1534	-1493	-1453	-1412	-1371	-1331	-1290
B	11766	11447	11127	10808	10489	10170	9850
C	-10336	-10047	-9758	-9470	-9181	-8893	-8604

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1249	-1209	-1168	-1128	-1087	-1046	-1006
B	9531	9212	8893	8574	8254	7935	7616
C	-8315	-8027	-7738	-7450	-7161	-6872	-6584

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-232051035 (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 = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03624969 (BLXT Pilot 7)
Calibration phase offset	DO -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2024-06-28

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3778
Date of sterilization	2023-06-12

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