

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

pH calibration parameters Lot No.2210121 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.35	63.27	63.19	63.11	63.03	62.95	62.87
φ max	15.01	15.02	15.02	15.03	15.04	15.05	15.05
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.52
pH ₀	6.65	6.65	6.64	6.64	6.63	6.63	6.62

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.79	62.71	62.63	62.55	62.47	62.39	62.31
φ max	15.06	15.07	15.07	15.08	15.09	15.10	15.10
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.62	6.61	6.61	6.60	6.60	6.59	6.59

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.23	62.15	62.07	61.99	61.91	61.83	61.75
φ max	15.11	15.12	15.12	15.13	15.14	15.15	15.15
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.58	6.58	6.57	6.57	6.56	6.56	6.55

pH sensor properties

Dynamic range	pH 3.90 - 8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 5.15 ; ± 0.1 pH at pH 5.15 - 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 HP8-2148-01 (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 3.00 ± 0.02 / pH 4.00 ± 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_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-08-30

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.2210121 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4322	-4240	-4157	-4075	-3992	-3909	-3827
B	34110	33454	32797	32140	31484	30827	30171
C	-30992	-30391	-29790	-29188	-28587	-27986	-27385

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3744	-3661	-3579	-3496	-3413	-3331	-3248
B	29514	28858	28201	27545	26888	26232	25575
C	-26783	-26182	-25581	-24980	-24379	-23777	-23176

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3166	-3083	-3000	-2918	-2835	-2752	-2670
B	24918	24262	23605	22949	22292	21636	20979
C	-22575	-21974	-21372	-20771	-20170	-19569	-18968

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 PSt3-HG-1921-01_5 (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_BOH1 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-08-30

Sterilization procedure

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

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