

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

**pH calibration parameters Lot No.2403121+2403127 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	61.77	61.71	61.66	61.60	61.54	61.48	61.42
φ max	12.32	12.32	12.33	12.34	12.35	12.35	12.36
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.65	6.64	6.63	6.62	6.61	6.60	6.58

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.37	61.31	61.25	61.19	61.13	61.07	61.02
φ max	12.37	12.38	12.38	12.39	12.40	12.41	12.41
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.57	6.56	6.55	6.54	6.53	6.52	6.51

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	60.96	60.90	60.84	60.78	60.73	60.67	60.61
φ max	12.42	12.43	12.44	12.44	12.45	12.46	12.47
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.50	6.49	6.48	6.46	6.45	6.44	6.43

**pH sensor properties**

Dynamic range	pH 4.75 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.30 ; ± 0.25 pH at pH 7.30 - 7.55 (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 HP8-2211-01 (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 ± 0.02, 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: 03166168 BLXT0067
Calibration phase offset	pH -1.70 (pH Ser. 3567, gain 7)
Date of calibration	2024-04-24

**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](http://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.2403121+2403127 (BioLector XT Microbioreactor, filter module ID-503)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4182	-4115	-4048	-3980	-3913	-3846	-3779
B	32912	32380	31848	31316	30785	30253	29721
C	-29806	-29322	-28838	-28354	-27870	-27386	-26902

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3711	-3644	-3577	-3509	-3442	-3375	-3308
B	29189	28657	28125	27593	27061	26530	25998
C	-26417	-25933	-25449	-24965	-24481	-23997	-23513

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3240	-3173	-3106	-3038	-2971	-2904	-2837
B	25466	24934	24402	23870	23338	22806	22275
C	-23028	-22544	-22060	-21576	-21092	-20608	-20124

#### DO sensor properties

Dynamic range	0 - 100 % oxygen
Resolution	Up to 0.1 % O <sub>2</sub> (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O <sub>2</sub> per day (sampling interval of 6 min)
Response time (t <sub>90</sub> )	< 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) <b>DO sensors are light-sensitive; please protect them from direct light!</b>

#### 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: 03166168 BLXT0067
Calibration phase offset	DO -360.66 (DO Ser. 4446, gain 7)
Date of calibration	2024-04-24

#### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5171
Date of sterilization	2024-04-08

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