

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

**pH calibration parameters Lot No.2307221+2307227 (BioLector XT Microbioreactor, filter module ID-521)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.06	69.94	69.82	69.70	69.58	69.46	69.34
φ max	22.71	22.62	22.53	22.44	22.35	22.27	22.18
dpH	0.67	0.67	0.67	0.67	0.66	0.66	0.66
pH <sub>0</sub>	5.92	5.91	5.89	5.88	5.87	5.86	5.85

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.22	69.10	68.99	68.87	68.75	68.63	68.51
φ max	22.09	22.00	21.91	21.82	21.73	21.64	21.55
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH <sub>0</sub>	5.83	5.82	5.81	5.80	5.79	5.77	5.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.39	68.27	68.15	68.03	67.91	67.79	67.67
φ max	21.46	21.37	21.28	21.19	21.11	21.02	20.93
dpH	0.66	0.65	0.65	0.65	0.65	0.65	0.65
pH <sub>0</sub>	5.75	5.74	5.73	5.71	5.70	5.69	5.68

**pH sensor properties**

Dynamic range	pH 3.65 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.60 ; ± 0.25 pH at pH 6.60 - 7.05 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.53 (pH Ser. 3513, gain 8)
Date of calibration	2023-04-21

**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.2307221+2307227 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1892	-1865	-1838	-1811	-1784	-1757	-1729
B	14578	14367	14155	13944	13733	13522	13310
C	-12878	-12689	-12500	-12310	-12121	-11932	-11743

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1702	-1675	-1648	-1621	-1594	-1567	-1540
B	13099	12888	12677	12465	12254	12043	11832
C	-11553	-11364	-11175	-10986	-10796	-10607	-10418

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1513	-1486	-1459	-1432	-1404	-1377	-1350
B	11621	11409	11198	10987	10776	10564	10353
C	-10228	-10039	-9850	-9661	-9471	-9282	-9093

**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 RF-230250057+58 (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_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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2023-04-21

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3664
Date of sterilization	2023-04-18

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