

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

**pH calibration parameters Lot No.2206101 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.83	62.77	62.70	62.63	62.56	62.49	62.43
φ max	14.49	14.51	14.53	14.55	14.57	14.59	14.62
dpH	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH <sub>0</sub>	6.61	6.61	6.60	6.59	6.59	6.58	6.57

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.36	62.29	62.22	62.15	62.08	62.02	61.95
φ max	14.64	14.66	14.68	14.70	14.72	14.74	14.77
dpH	0.50	0.50	0.50	0.50	0.51	0.51	0.51
pH <sub>0</sub>	6.57	6.56	6.56	6.55	6.54	6.54	6.53

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.88	61.81	61.74	61.68	61.61	61.54	61.47
φ max	14.79	14.81	14.83	14.85	14.87	14.89	14.91
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.53	6.52	6.51	6.51	6.50	6.50	6.49

**pH sensor properties**

Dynamic range	pH 4.75 - 8.05
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 - 7.60 (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 = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.06 (pH Ser. 3567, gain 7)
Date of calibration	2022-05-23

**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

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

**DO calibration parameters Lot No.2206101 (BioLector XT Microbioreactor, filter module ID-503)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4188	-4107	-4026	-3945	-3865	-3784	-3703
B	33003	32361	31718	31075	30432	29789	29146
C	-29935	-29347	-28759	-28171	-27583	-26995	-26407

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3622	-3541	-3460	-3379	-3298	-3217	-3136
B	28504	27861	27218	26575	25932	25289	24647
C	-25819	-25231	-24643	-24054	-23466	-22878	-22290

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3055	-2974	-2893	-2812	-2731	-2650	-2569
B	24004	23361	22718	22075	21432	20790	20147
C	-21702	-21114	-20526	-19938	-19350	-18762	-18174

#### 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_4 (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 OC buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH1, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.98 (DO Ser. 4446, gain 7)
Date of calibration	2022-05-23

#### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1035388
Date of sterilization	2022-05-10

#### 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