

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

**pH calibration parameters Lot No.2213121 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.81	62.72	62.63	62.55	62.46	62.37	62.28
φ max	13.32	13.33	13.35	13.37	13.38	13.40	13.41
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH <sub>0</sub>	6.72	6.71	6.71	6.70	6.70	6.69	6.69

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.20	62.11	62.02	61.93	61.85	61.76	61.67
φ max	13.43	13.44	13.46	13.48	13.49	13.51	13.52
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH <sub>0</sub>	6.68	6.68	6.67	6.67	6.66	6.65	6.65

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.58	61.50	61.41	61.32	61.23	61.15	61.06
φ max	13.54	13.55	13.57	13.59	13.60	13.62	13.63
dpH	0.52	0.52	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.64	6.64	6.63	6.63	6.62	6.62	6.61

**pH sensor properties**

Dynamic range	pH 4.80 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.25 - 5.55 ; ± 0.1 pH at pH 5.55 - 7.45 ; ± 0.25 pH at pH 7.45 - 7.70 (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 -2.32 (pH Ser. 3567, gain 7)
Date of calibration	2022-10-12

**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 BioLector software!

**DO calibration parameters Lot No.2213121 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-3651	-3587	-3523	-3459	-3395	-3331	-3267
B	28708	28202	27696	27190	26684	26178	25672
C	-25975	-25514	-25053	-24592	-24131	-23670	-23209

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3203	-3139	-3075	-3011	-2947	-2883	-2819
B	25166	24660	24154	23648	23142	22636	22130
C	-22748	-22287	-21826	-21365	-20904	-20444	-19983

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-2755	-2691	-2627	-2563	-2499	-2436	-2372
B	21624	21118	20612	20106	19600	19094	18588
C	-19522	-19061	-18600	-18139	-17678	-17217	-16756

**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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.87 (DO Ser. 4446, gain 7)
Date of calibration	2022-10-12

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-07

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