

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

**pH calibration parameters Lot No.2116101+2116107 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.45	64.38	64.31	64.24	64.16	64.09	64.02
φ max	12.75	12.76	12.78	12.80	12.81	12.83	12.84
d pH	0.55	0.55	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.17	6.17	6.16	6.15	6.14	6.14	6.13

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.95	63.88	63.81	63.74	63.66	63.59	63.52
φ max	12.86	12.87	12.89	12.90	12.92	12.93	12.95
d pH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.12	6.11	6.11	6.10	6.09	6.08	6.07

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.45	63.38	63.31	63.23	63.16	63.09	63.02
φ max	12.96	12.98	12.99	13.01	13.02	13.04	13.05
d pH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.07	6.06	6.05	6.04	6.04	6.03	6.02

**pH sensor properties**

Dynamic range	pH 4.20 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 4.95 ; ± 0.1 pH at pH 4.95 - 6.95 ; ± 0.25 pH at pH 6.95 - 7.25 (batch calibration)
Response time (t <sub>90</sub> )	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 HP8-1811-01_5 (at least stable for 7 days with CertiPUR-buffer) <b>pH sensors are light-sensitive; please protect them from direct light!</b>

**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 -1.81 (pH Ser. 3511, gain 7)
Date of calibration	2021-12-07

**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.2116101+2116107 (BioLector XT Microbioreactor, filter module ID-503)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4446	-4369	-4291	-4213	-4135	-4057	-3979
B	35066	34448	33830	33213	32595	31977	31360
C	-31838	-31273	-30708	-30143	-29579	-29014	-28449

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3902	-3824	-3746	-3668	-3590	-3512	-3434
B	30742	30124	29506	28889	28271	27653	27035
C	-27884	-27319	-26755	-26190	-25625	-25060	-24495

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3357	-3279	-3201	-3123	-3045	-2967	-2889
B	26418	25800	25182	24564	23947	23329	22711
C	-23931	-23366	-22801	-22236	-21672	-21107	-20542

**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_3 (at least stable for 7 days with CertiPUR-buffer)

**DO sensors are light-sensitive; please protect them from direct light!**

**DO calibration**

Calibration	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
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 -360.63 (DO Ser. 4446, gain 7)
Date of calibration	2021-12-07

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	972085
Date of sterilization	2021-11-25

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