

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

pH calibration parameters Lot No.2203101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.29	64.21	64.13	64.06	63.98	63.90	63.83
φ max	12.92	12.92	12.92	12.93	12.93	12.93	12.93
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.23	6.23	6.22	6.21	6.20	6.20	6.19

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.75	63.67	63.60	63.52	63.44	63.37	63.29
φ max	12.93	12.93	12.93	12.93	12.93	12.94	12.94
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.18	6.18	6.17	6.16	6.15	6.15	6.14

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.22	63.14	63.06	62.99	62.91	62.83	62.76
φ max	12.94	12.94	12.94	12.94	12.94	12.94	12.94
dpH	0.55	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.13	6.12	6.12	6.11	6.10	6.10	6.09

pH sensor properties

Dynamic range	pH 4.25 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.70 - 5.00 ; ± 0.1 pH at pH 5.00 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.35 (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 HP8-1811-01_6 (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 -2.07 (pH Ser. 3567, gain 7)
Date of calibration	2022-03-15

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
 - 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.2203101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4387	-4307	-4226	-4145	-4065	-3984	-3903
B	34594	33953	33312	32672	32031	31390	30749
C	-31400	-30814	-30228	-29642	-29056	-28470	-27884

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3822	-3742	-3661	-3580	-3499	-3419	-3338
B	30109	29468	28827	28186	27545	26905	26264
C	-27298	-26712	-26126	-25540	-24954	-24368	-23782

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3257	-3176	-3096	-3015	-2934	-2854	-2773
B	25623	24982	24341	23701	23060	22419	21778
C	-23196	-22610	-22024	-21438	-20852	-20266	-19680

DO sensor properties

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

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 = 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	2022-03-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1004997
Date of sterilization	2022-02-23

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