

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

pH calibration parameters Lot No.2208121 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.62	63.55	63.47	63.39	63.31	63.24	63.16
φ max	13.75	13.77	13.79	13.82	13.84	13.87	13.89
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.63	6.62	6.62	6.61	6.61	6.60	6.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.08	63.01	62.93	62.85	62.77	62.70	62.62
φ max	13.91	13.94	13.96	13.99	14.01	14.03	14.06
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.59	6.59	6.58	6.58	6.57	6.57	6.56

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.54	62.46	62.39	62.31	62.23	62.15	62.08
φ max	14.08	14.11	14.13	14.15	14.18	14.20	14.23
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.56	6.55	6.55	6.54	6.54	6.53	6.53

pH sensor properties

Dynamic range	pH 4.65 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.35 ; ± 0.25 pH at pH 7.35 - 7.65 (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 -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-08-04

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.2208121 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4471	-4382	-4293	-4203	-4114	-4025	-3936
B	35275	34566	33857	33148	32439	31730	31021
C	-32042	-31393	-30744	-30095	-29446	-28797	-28148

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3846	-3757	-3668	-3579	-3489	-3400	-3311
B	30312	29603	28894	28185	27476	26767	26058
C	-27499	-26850	-26201	-25552	-24903	-24253	-23604

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3222	-3132	-3043	-2954	-2865	-2775	-2686
B	25349	24640	23932	23223	22514	21805	21096
C	-22955	-22306	-21657	-21008	-20359	-19710	-19061

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 = 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 -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-08-04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1064096
Date of sterilization	2022-07-28

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