

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

pH calibration parameters Lot No.2210101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.41	63.34	63.27	63.20	63.12	63.05	62.98
φ max	14.83	14.84	14.86	14.88	14.90	14.92	14.93
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.58	6.57	6.57	6.56	6.55	6.55	6.54

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.91	62.83	62.76	62.69	62.62	62.55	62.47
φ max	14.95	14.97	14.99	15.01	15.02	15.04	15.06
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.54	6.53	6.53	6.52	6.51	6.51	6.50

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.40	62.33	62.26	62.18	62.11	62.04	61.97
φ max	15.08	15.10	15.12	15.13	15.15	15.17	15.19
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.50	6.49	6.48	6.48	6.47	6.47	6.46

pH sensor properties

Dynamic range	pH 4.65 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10 - 5.40 ; ± 0.1 pH at pH 5.40 - 7.25 ; ± 0.25 pH at pH 7.25 - 7.55 (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 -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-09-06

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.2210101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4569	-4486	-4404	-4322	-4239	-4157	-4075
B	36043	35389	34736	34082	33429	32775	32122
C	-32741	-32143	-31545	-30947	-30349	-29751	-29153

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3992	-3910	-3828	-3745	-3663	-3581	-3498
B	31468	30815	30161	29507	28854	28200	27547
C	-28555	-27957	-27359	-26761	-26163	-25565	-24967

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3416	-3334	-3251	-3169	-3087	-3004	-2922
B	26893	26240	25586	24933	24279	23625	22972
C	-24369	-23771	-23174	-22576	-21978	-21380	-20782

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_5 (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 -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-09-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

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