

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

pH calibration parameters Lot No.2206201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.07	72.00	71.92	71.84	71.76	71.68	71.61
φ max	23.47	23.41	23.35	23.29	23.23	23.17	23.11
d pH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.99	5.98	5.96	5.95	5.94	5.93	5.92

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.53	71.45	71.37	71.29	71.22	71.14	71.06
φ max	23.06	23.00	22.94	22.88	22.82	22.76	22.70
d pH	0.71	0.71	0.72	0.72	0.72	0.72	0.72
pH ₀	5.91	5.90	5.88	5.87	5.86	5.85	5.84

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.98	70.90	70.83	70.75	70.67	70.59	70.51
φ max	22.64	22.59	22.53	22.47	22.41	22.35	22.29
d pH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	5.83	5.82	5.80	5.79	5.78	5.77	5.76

pH sensor properties

Dynamic range	pH 3.55 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.25 (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 LG1-2141-01 (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 2.00 ± 0.02 / pH 3.00 ± 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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.79 (pH Ser. 3513, gain 8)
Date of calibration	2022-05-20

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.2206201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1860	-1826	-1792	-1758	-1724	-1690	-1656
B	14353	14087	13820	13554	13288	13022	12755
C	-12704	-12464	-12224	-11984	-11744	-11505	-11265

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1622	-1588	-1554	-1520	-1486	-1452	-1418
B	12489	12223	11956	11690	11424	11157	10891
C	-11025	-10785	-10545	-10305	-10065	-9826	-9586

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1384	-1350	-1316	-1282	-1248	-1214	-1180
B	10625	10358	10092	9826	9560	9293	9027
C	-9346	-9106	-8866	-8626	-8387	-8147	-7907

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 RF-204150647 (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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1035388
Date of sterilization	2022-05-10

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