

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

pH calibration parameters Lot No.2208207 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.29	72.21	72.13	72.04	71.96	71.88	71.80
φ max	24.35	24.27	24.20	24.13	24.06	23.99	23.91
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.98	5.96	5.95	5.94	5.93	5.92	5.91

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.72	71.64	71.56	71.48	71.39	71.31	71.23
φ max	23.84	23.77	23.70	23.63	23.55	23.48	23.41
dpH	0.71	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	5.89	5.88	5.87	5.86	5.85	5.84	5.82

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.15	71.07	70.99	70.91	70.82	70.74	70.66
φ max	23.34	23.27	23.19	23.12	23.05	22.98	22.90
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	5.81	5.80	5.79	5.78	5.77	5.75	5.74

pH sensor properties

Dynamic range	pH 3.55 - 7.95
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 - 7.20 (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 = Round Well Plate (MTP-R48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-08-16

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

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

DO calibration parameters Lot No.2208207 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1951	-1911	-1870	-1829	-1789	-1748	-1708
B	15074	14754	14435	14115	13796	13476	13157
C	-13358	-13068	-12779	-12489	-12200	-11910	-11620

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1667	-1627	-1586	-1546	-1505	-1464	-1424
B	12837	12518	12199	11879	11560	11240	10921
C	-11331	-11041	-10751	-10462	-10172	-9883	-9593

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1383	-1343	-1302	-1262	-1221	-1180	-1140
B	10601	10282	9962	9643	9324	9004	8685
C	-9303	-9014	-8724	-8435	-8145	-7855	-7566

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-221155395 (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 = Round Well Plate (MTP-R48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-08-16

Sterilization procedure

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

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