

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

pH calibration parameters Lot No.2208201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.00	71.91	71.82	71.73	71.64	71.55	71.46
φ max	23.84	23.76	23.67	23.59	23.51	23.42	23.34
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	6.02	6.00	5.99	5.98	5.97	5.96	5.95

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.38	71.29	71.20	71.11	71.02	70.93	70.84
φ max	23.26	23.17	23.09	23.00	22.92	22.84	22.75
dpH	0.70	0.70	0.71	0.71	0.71	0.71	0.71
pH ₀	5.93	5.92	5.91	5.90	5.89	5.88	5.87

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.76	70.67	70.58	70.49	70.40	70.31	70.22
φ max	22.67	22.58	22.50	22.42	22.33	22.25	22.16
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.85	5.84	5.83	5.82	5.81	5.80	5.78

pH sensor properties

Dynamic range	pH 3.65 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.35 - 4.80 ; ± 0.1 pH at pH 4.80 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.15 (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 -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-08-11

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 BioLection software!

DO calibration parameters Lot No.2208201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-2096	-2052	-2008	-1963	-1919	-1874	-1830
B	16232	15882	15533	15183	14833	14484	14134
C	-14423	-14106	-13789	-13472	-13154	-12837	-12520

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1786	-1741	-1697	-1652	-1608	-1564	-1519
B	13784	13434	13085	12735	12385	12035	11686
C	-12203	-11885	-11568	-11251	-10934	-10617	-10299

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1475	-1431	-1386	-1342	-1297	-1253	-1209
B	11336	10986	10637	10287	9937	9587	9238
C	-9982	-9665	-9348	-9031	-8713	-8396	-8079

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 (t90)	< 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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-08-11

Sterilization procedure

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

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