

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

pH calibration parameters Lot No.2204307 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	67.26	67.39	67.52	67.65	67.78	67.91	68.04
φ max	9.70	9.72	9.74	9.76	9.78	9.80	9.82
d pH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.51	5.50	5.50	5.49	5.49	5.48	5.47

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.17	68.30	68.43	68.56	68.69	68.82	68.95
φ max	9.84	9.86	9.88	9.90	9.92	9.94	9.96
d pH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.40	-0.40
pH ₀	5.47	5.46	5.46	5.45	5.45	5.44	5.44

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.08	69.21	69.34	69.47	69.60	69.73	69.86
φ max	9.98	10.00	10.01	10.03	10.05	10.07	10.09
d pH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.43	5.43	5.42	5.42	5.41	5.41	5.40

pH sensor properties

Dynamic range	pH 4.00 - 6.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.45 ; ± 0.1 pH at pH 4.45 - 6.20 ; ± 0.25 pH at pH 6.20 - 6.40 (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 pH51-211650283 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.12 (pH Ser. 3587, gain 6)
Date of calibration	2022-04-14

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.2204307 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1795	-1761	-1728	-1694	-1661	-1628	-1594
B	13831	13570	13308	13047	12785	12524	12262
C	-12221	-11985	-11749	-11513	-11277	-11041	-10805

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1561	-1528	-1494	-1461	-1428	-1394	-1361
B	12000	11739	11477	11216	10954	10693	10431
C	-10569	-10333	-10097	-9861	-9625	-9389	-9153

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1328	-1294	-1261	-1228	-1194	-1161	-1128
B	10170	9908	9647	9385	9124	8862	8601
C	-8917	-8681	-8445	-8209	-7974	-7738	-7502

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-213550643 (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_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-04-14

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1020859
Date of sterilization	2022-04-01

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