

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

pH calibration parameters Lot No.2207307 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.41	70.50	70.59	70.68	70.77	70.86	70.95
φ max	16.96	17.02	17.07	17.13	17.19	17.24	17.30
d pH	-0.42	-0.42	-0.42	-0.41	-0.41	-0.41	-0.41
pH ₀	5.26	5.25	5.24	5.24	5.23	5.23	5.22

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.04	71.12	71.21	71.30	71.39	71.48	71.57
φ max	17.36	17.41	17.47	17.52	17.58	17.64	17.69
d pH	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.21	5.21	5.20	5.20	5.19	5.18	5.18

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.66	71.75	71.84	71.92	72.01	72.10	72.19
φ max	17.75	17.81	17.86	17.92	17.98	18.03	18.09
d pH	-0.40	-0.40	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.17	5.17	5.16	5.15	5.15	5.14	5.14

pH sensor properties

Dynamic range	pH 3.55 - 6.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90 - 4.10 ; ± 0.1 pH at pH 4.10 - 5.95 ; ± 0.25 pH at pH 5.95 - 6.10 (batch calibration)
Response time (t ₉₀)	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 pH51-214250701 (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 Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.94 (pH Ser. 3587, gain 6)
Date of calibration	2022-07-06

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.2207307 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1747	-1714	-1681	-1648	-1616	-1583	-1550
B	13442	13185	12928	12671	12414	12157	11900
C	-11855	-11623	-11392	-11160	-10928	-10696	-10464

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1517	-1484	-1452	-1419	-1386	-1353	-1320
B	11642	11385	11128	10871	10614	10357	10100
C	-10232	-10000	-9768	-9537	-9305	-9073	-8841

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1288	-1255	-1222	-1189	-1156	-1124	-1091
B	9843	9585	9328	9071	8814	8557	8300
C	-8609	-8377	-8145	-7913	-7682	-7450	-7218

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-221155394 (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 Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.76 (DO Ser. 4452, gain 4)
Date of calibration	2022-07-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1048503
Date of sterilization	2022-06-17

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