

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

pH calibration parameters Lot No.2215321 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	66.21	66.29	66.38	66.46	66.54	66.63	66.71
ϕ max	10.20	10.24	10.27	10.31	10.34	10.38	10.41
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.45	5.44	5.44	5.43	5.42	5.42	5.41

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	66.80	66.88	66.97	67.05	67.14	67.22	67.30
ϕ max	10.45	10.49	10.52	10.56	10.59	10.63	10.66
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.41	5.40	5.39	5.39	5.38	5.38	5.37

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.39	67.47	67.56	67.64	67.73	67.81	67.89
ϕ max	10.70	10.74	10.77	10.81	10.84	10.88	10.91
dpH	-0.40	-0.40	-0.40	-0.39	-0.39	-0.39	-0.39
pH ₀	5.37	5.36	5.35	5.35	5.34	5.34	5.33

pH sensor properties

Dynamic range	pH 3.90 - 6.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20 - 4.40 ; ± 0.1 pH at pH 4.40 - 6.15 ; ± 0.25 pH at pH 6.15 - 6.30 (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 pH51-211650292 (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 = MF_pH_DO_calibration_BOH3 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: 03515297 (BLXT 0073)
Calibration phase offset	pH -360.45 (pH Ser. 3587, gain 6)
Date of calibration	2022-12-14

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.2215321 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1871	-1834	-1798	-1761	-1724	-1687	-1651
B	14397	14109	13821	13533	13245	12957	12669
C	-12696	-12437	-12177	-11917	-11658	-11398	-11138

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1614	-1577	-1540	-1504	-1467	-1430	-1393
B	12381	12093	11805	11517	11229	10941	10654
C	-10879	-10619	-10359	-10100	-9840	-9580	-9321

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1357	-1320	-1283	-1246	-1210	-1173	-1136
B	10366	10078	9790	9502	9214	8926	8638
C	-9061	-8802	-8542	-8282	-8023	-7763	-7503

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-222756999 (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 = MF_pH_DO_calibration_BOH3 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: 03515297 (BLXT 0073)
Calibration phase offset	DO -360.77 (DO Ser. 4671, gain 4)
Date of calibration	2022-12-14

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3130
Date of sterilization	2021-03-03

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