

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

pH calibration parameters Lot No.2213221 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.56	69.45	69.35	69.24	69.13	69.02	68.91
φ max	21.76	21.67	21.59	21.51	21.43	21.35	21.27
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.84	5.82	5.81	5.80	5.79	5.78	5.76

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.80	68.70	68.59	68.48	68.37	68.26	68.16
φ max	21.19	21.11	21.03	20.95	20.86	20.78	20.70
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.75	5.74	5.73	5.71	5.70	5.69	5.68

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.05	67.94	67.83	67.72	67.61	67.51	67.40
φ max	20.62	20.54	20.46	20.38	20.30	20.22	20.14
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.67	5.65	5.64	5.63	5.62	5.60	5.59

pH sensor properties

Dynamic range	pH 3.40 - 7.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.10 - 4.60 ; ± 0.1 pH at pH 4.60 - 6.50 ; ± 0.25 pH at pH 6.50 - 6.95 (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 LG1-2212-01 (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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.75 (pH Ser. 3513, gain 8)
Date of calibration	2022-10-06

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.2213221 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1706	-1673	-1640	-1607	-1574	-1541	-1508
B	13132	12873	12613	12353	12093	11833	11573
C	-11583	-11348	-11114	-10879	-10645	-10410	-10176

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1474	-1441	-1408	-1375	-1342	-1309	-1276
B	11313	11053	10793	10533	10274	10014	9754
C	-9941	-9707	-9472	-9238	-9003	-8769	-8534

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1242	-1209	-1176	-1143	-1110	-1077	-1044
B	9494	9234	8974	8714	8454	8194	7934
C	-8300	-8065	-7831	-7596	-7362	-7128	-6893

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-222756995 (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_BOH2, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.81 (DO Ser. 4452, gain 4)
Date of calibration	2022-10-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1085201
Date of sterilization	2022-09-27

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