

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

pH calibration parameters Lot No.2213321 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.31	68.40	68.49	68.58	68.68	68.77	68.86
φ max	8.54	8.56	8.57	8.58	8.60	8.61	8.62
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.48	5.47	5.47	5.46	5.46	5.45	5.45

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.95	69.04	69.13	69.22	69.31	69.40	69.50
φ max	8.64	8.65	8.67	8.68	8.69	8.71	8.72
dpH	-0.37	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.44	5.44	5.43	5.42	5.42	5.41	5.41

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.59	69.68	69.77	69.86	69.95	70.04	70.13
φ max	8.73	8.75	8.76	8.77	8.79	8.80	8.81
dpH	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.40	5.40	5.39	5.39	5.38	5.38	5.37

pH sensor properties

Dynamic range	pH 4.15 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.55 ; ± 0.1 pH at pH 4.55 - 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 pH51-211650289 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.94 (pH Ser. 3587, gain 6)
Date of calibration	2022-10-04

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.2213321 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1610	-1579	-1549	-1518	-1488	-1457	-1427
B	12359	12121	11883	11645	11407	11169	10930
C	-10872	-10658	-10443	-10229	-10014	-9800	-9586

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1397	-1366	-1336	-1305	-1275	-1244	-1214
B	10692	10454	10216	9978	9740	9502	9264
C	-9371	-9157	-8943	-8728	-8514	-8300	-8085

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1184	-1153	-1123	-1092	-1062	-1031	-1001
B	9025	8787	8549	8311	8073	7835	7597
C	-7871	-7657	-7442	-7228	-7014	-6799	-6585

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-222756996 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.76 (DO Ser. 4452, gain 4)
Date of calibration	2022-10-04

Sterilization procedure

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

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