

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

pH calibration parameters Lot No.2202321 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	61.73	61.86	62.00	62.13	62.26	62.39	62.53
φ max	8.48	8.49	8.51	8.52	8.54	8.55	8.56
dpH	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.60	5.59	5.59	5.58	5.58	5.57	5.57

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.66	62.79	62.93	63.06	63.19	63.32	63.46
φ max	8.58	8.59	8.61	8.62	8.63	8.65	8.66
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.39
pH ₀	5.56	5.56	5.55	5.55	5.54	5.54	5.53

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.59	63.72	63.85	63.99	64.12	64.25	64.38
φ max	8.68	8.69	8.71	8.72	8.73	8.75	8.76
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.53	5.52	5.52	5.51	5.51	5.50	5.50

pH sensor properties

Dynamic range	pH 4.10 - 6.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.60 ; ± 0.1 pH at pH 4.60 - 6.30 ; ± 0.25 pH at pH 6.30 - 6.50 (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 pH51-202850565 (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 -361.13 (pH Ser. 3587, gain 6)
Date of calibration	2022-03-08

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.2202321 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1647	-1621	-1594	-1568	-1541	-1515	-1488
B	12626	12420	12215	12009	11803	11597	11392
C	-11081	-10898	-10714	-10531	-10347	-10164	-9980

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1462	-1435	-1409	-1383	-1356	-1330	-1303
B	11186	10980	10775	10569	10363	10158	9952
C	-9797	-9613	-9429	-9246	-9062	-8879	-8695

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1277	-1250	-1224	-1197	-1171	-1144	-1118
B	9746	9541	9335	9129	8924	8718	8512
C	-8512	-8328	-8144	-7961	-7777	-7594	-7410

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-213550642 (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 -360.90 (DO Ser. 4452, gain 4)
Date of calibration	2022-03-08

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1001695
Date of sterilization	2022-02-16

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