

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

pH calibration parameters Lot No.2207321 and 2207327 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	65.51	65.63	65.76	65.88	66.01	66.13	66.25
φ max	10.20	10.23	10.25	10.28	10.31	10.33	10.36
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH ₀	5.48	5.48	5.47	5.46	5.46	5.45	5.44

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	66.38	66.50	66.63	66.75	66.87	67.00	67.12
φ max	10.39	10.41	10.44	10.47	10.50	10.52	10.55
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.41	-0.41
pH ₀	5.44	5.43	5.42	5.42	5.41	5.41	5.40

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.25	67.37	67.49	67.62	67.74	67.87	67.99
φ max	10.58	10.60	10.63	10.66	10.68	10.71	10.74
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.39	5.39	5.38	5.37	5.37	5.36	5.35

pH sensor properties

Dynamic range	pH 3.75 - 6.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15 - 4.35 ; ± 0.1 pH at pH 4.35 - 6.15 ; ± 0.25 pH at pH 6.15 - 6.35 (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 pH51-21650284 (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-MF32-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.12 (pH Ser. 3587, gain 6)
Date of calibration	2022-06-30

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.2207321 and 2207327 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1702	-1671	-1639	-1608	-1577	-1546	-1515
B	13090	12846	12603	12359	12115	11871	11627
C	-11539	-11319	-11100	-10880	-10660	-10440	-10221

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1484	-1453	-1422	-1391	-1360	-1328	-1297
B	11384	11140	10896	10652	10409	10165	9921
C	-10001	-9781	-9561	-9341	-9122	-8902	-8682

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1266	-1235	-1204	-1173	-1142	-1111	-1080
B	9677	9433	9190	8946	8702	8458	8214
C	-8462	-8242	-8023	-7803	-7583	-7363	-7144

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 = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-06-30

Sterilization procedure

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

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