

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

pH calibration parameters Lot No.2207311 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	66.07	66.15	66.24	66.32	66.40	66.49	66.57
ϕ max	9.98	10.00	10.02	10.05	10.07	10.09	10.12
dpH	-0.42	-0.42	-0.42	-0.41	-0.41	-0.41	-0.41
pH ₀	5.50	5.49	5.49	5.48	5.47	5.47	5.46

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	66.66	66.74	66.83	66.91	67.00	67.08	67.17
ϕ max	10.14	10.16	10.19	10.21	10.23	10.26	10.28
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.45	5.45	5.44	5.43	5.43	5.42	5.41

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.25	67.34	67.42	67.50	67.59	67.67	67.76
ϕ max	10.30	10.33	10.35	10.37	10.39	10.42	10.44
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.41	5.40	5.40	5.39	5.38	5.38	5.37

pH sensor properties

Dynamic range	pH 3.80 - 6.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15 - 4.40 ; ± 0.1 pH at pH 4.40 - 6.20 ; ± 0.25 pH at pH 6.20 - 6.40 (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	2022-06-22

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.2207311 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1890	-1853	-1816	-1780	-1743	-1706	-1670
B	14601	14312	14024	13735	13446	13158	12869
C	-12940	-12678	-12417	-12155	-11894	-11632	-11371

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1633	-1596	-1560	-1523	-1486	-1450	-1413
B	12580	12292	12003	11714	11426	11137	10848
C	-11109	-10848	-10586	-10325	-10063	-9802	-9540

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1376	-1340	-1303	-1266	-1230	-1193	-1156
B	10560	10271	9982	9694	9405	9116	8828
C	-9279	-9017	-8756	-8494	-8233	-7971	-7710

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	2022-06-22

Sterilization procedure

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

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