

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

pH calibration parameters Lot No.2204101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	64.86	64.78	64.70	64.62	64.54	64.46	64.38
φ max	13.09	13.09	13.09	13.08	13.08	13.08	13.07
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.22	6.22	6.21	6.20	6.19	6.19	6.18

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	64.30	64.22	64.14	64.06	63.98	63.90	63.82
φ max	13.07	13.07	13.06	13.06	13.06	13.05	13.05
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.17	6.16	6.16	6.15	6.14	6.13	6.13

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.74	63.66	63.58	63.50	63.42	63.34	63.26
φ max	13.05	13.04	13.04	13.04	13.03	13.03	13.03
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.12	6.11	6.11	6.10	6.09	6.08	6.08

pH sensor properties

Dynamic range	pH 4.20 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.70 - 5.00 ; ± 0.1 pH at pH 5.00 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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 HP8-1811-01_6 (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 3.00 ± 0.02 / pH 4.00 ± 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 = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.06 (pH Ser. 3567, gain 7)
Date of calibration	2022-04-19

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.2204101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4497	-4421	-4345	-4268	-4192	-4116	-4040
B	35457	34853	34248	33644	33039	32434	31830
C	-32181	-31628	-31075	-30523	-29970	-29417	-28865

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3964	-3888	-3811	-3735	-3659	-3583	-3507
B	31225	30621	30016	29411	28807	28202	27598
C	-28312	-27759	-27207	-26654	-26101	-25549	-24996

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3430	-3354	-3278	-3202	-3126	-3049	-2973
B	26993	26388	25784	25179	24575	23970	23365
C	-24443	-23891	-23338	-22785	-22233	-21680	-21127

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 PSt3-HG-1921-01_4 (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 = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.98 (DO Ser. 4446, gain 7)
Date of calibration	2022-04-19

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1020859
Date of sterilization	2022-04-01

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