

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

pH calibration parameters Lot No.2308101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.64	63.57	63.49	63.41	63.34	63.26	63.19
φ max	14.87	14.89	14.91	14.93	14.95	14.97	14.99
dpH	0.53	0.53	0.53	0.54	0.54	0.54	0.54
pH ₀	6.56	6.55	6.54	6.54	6.53	6.53	6.52

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.11	63.04	62.96	62.89	62.81	62.74	62.66
φ max	15.00	15.02	15.04	15.06	15.08	15.10	15.12
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.51	6.51	6.50	6.49	6.49	6.48	6.48

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.59	62.51	62.44	62.36	62.28	62.21	62.13
φ max	15.14	15.16	15.18	15.20	15.22	15.23	15.25
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.47	6.46	6.46	6.45	6.44	6.44	6.43

pH sensor properties

Dynamic range	pH 4.65 - 8.05
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10 - 5.40 ; ± 0.1 pH at pH 5.40 - 7.25 ; ± 0.25 pH at pH 7.25 - 7.55 (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 HP8-2148-01_2 (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 -1.70 (pH Ser. 3567, gain 7)
Date of calibration	2023-05-23

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.2308101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4013	-3946	-3879	-3811	-3744	-3677	-3610
B	31590	31058	30527	29995	29464	28932	28401
C	-28623	-28139	-27654	-27169	-26684	-26199	-25714

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3543	-3476	-3409	-3342	-3275	-3208	-3140
B	27870	27338	26807	26275	25744	25212	24681
C	-25229	-24744	-24259	-23774	-23289	-22804	-22319

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3073	-3006	-2939	-2872	-2805	-2738	-2671
B	24149	23618	23086	22555	22023	21492	20960
C	-21835	-21350	-20865	-20380	-19895	-19410	-18925

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_5 (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 -360.66 (DO Ser. 4446, gain 7)
Date of calibration	2023-05-23

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3703
Date of sterilization	2023-04-26

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