

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

pH calibration parameters Lot No.2216101 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.49	62.43	62.37	62.32	62.26	62.20	62.14
φ max	14.14	14.16	14.18	14.19	14.21	14.23	14.25
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.62	6.60	6.59	6.58	6.57	6.56	6.55

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.08	62.02	61.96	61.90	61.84	61.78	61.72
φ max	14.27	14.29	14.31	14.32	14.34	14.36	14.38
dpH	0.51	0.50	0.50	0.50	0.50	0.50	0.50
pH ₀	6.54	6.53	6.51	6.50	6.49	6.48	6.47

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.66	61.60	61.54	61.48	61.42	61.36	61.30
φ max	14.40	14.42	14.43	14.45	14.47	14.49	14.51
dpH	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH ₀	6.46	6.45	6.43	6.42	6.41	6.40	6.39

pH sensor properties

Dynamic range	pH 4.75 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.20 ; ± 0.25 pH at pH 7.20 - 7.50 (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 HP8-2148-01 (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 -2.32 (pH Ser. 3567, gain 7)
Date of calibration	2023-01-10

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.2216101 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4047	-3970	-3893	-3816	-3739	-3662	-3585
B	31834	31223	30612	30002	29391	28780	28170
C	-28816	-28258	-27701	-27143	-26586	-26028	-25471

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3508	-3431	-3354	-3276	-3199	-3122	-3045
B	27559	26948	26337	25727	25116	24505	23894
C	-24913	-24356	-23798	-23241	-22683	-22126	-21569

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-2968	-2891	-2814	-2737	-2660	-2583	-2506
B	23284	22673	22062	21452	20841	20230	19619
C	-21011	-20454	-19896	-19339	-18781	-18224	-17666

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 -360.87 (DO Ser. 4446, gain 7)
Date of calibration	2023-01-10

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2022-12-23

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