

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

pH calibration parameters Lot No.2203201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	72.53	72.45	72.36	72.27	72.19	72.10	72.01
ϕ max	22.91	22.86	22.80	22.75	22.70	22.64	22.59
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.96	5.94	5.93	5.92	5.91	5.90	5.89

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	71.93	71.84	71.76	71.67	71.58	71.50	71.41
ϕ max	22.53	22.48	22.42	22.37	22.32	22.26	22.21
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.87	5.86	5.85	5.84	5.83	5.82	5.80

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	71.33	71.24	71.15	71.07	70.98	70.89	70.81
ϕ max	22.15	22.10	22.05	21.99	21.94	21.88	21.83
dpH	0.70	0.70	0.70	0.70	0.70	0.69	0.69
pH ₀	5.79	5.78	5.77	5.76	5.74	5.73	5.72

pH sensor properties

Dynamic range	pH 3.55 - 7.90
Resolution	Up to 0.01 pH (software) ± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.20 (batch calibration)
Accuracy	
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 LG1-2141-01 (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 2.00 ± 0.02 / pH 3.00 ± 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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.68 (pH Ser. 3513, gain 8)
Date of calibration	2022-03-15

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.2203201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-2691	-2648	-2605	-2562	-2519	-2475	-2432
B	21011	20671	20331	19991	19651	19311	18971
C	-18860	-18551	-18243	-17934	-17626	-17318	-17009

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-2389	-2346	-2303	-2260	-2216	-2173	-2130
B	18631	18291	17951	17611	17271	16931	16591
C	-16701	-16392	-16084	-15776	-15467	-15159	-14850

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-2087	-2044	-2001	-1958	-1914	-1871	-1828
B	16251	15911	15571	15231	14891	14551	14211
C	-14542	-14234	-13925	-13617	-13308	-13000	-12692

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-213550642 (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_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µl/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.83 (DO Ser. 4452, gain 4)
Date of calibration	2022-03-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1004997
Date of sterilization	2022-02-23

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