

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

pH calibration parameters Lot No.2402201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.41	71.30	71.18	71.07	70.96	70.85	70.73
φ max	25.42	25.32	25.22	25.12	25.02	24.92	24.83
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.92	5.91	5.90	5.90	5.89	5.88	5.87

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.62	70.51	70.40	70.28	70.17	70.06	69.95
φ max	24.73	24.63	24.53	24.43	24.33	24.23	24.14
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.71
pH ₀	5.86	5.85	5.84	5.83	5.82	5.81	5.80

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.83	69.72	69.61	69.50	69.38	69.27	69.16
φ max	24.04	23.94	23.84	23.74	23.64	23.55	23.45
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.79	5.78	5.78	5.77	5.76	5.75	5.74

pH sensor properties

Dynamic range	pH 3.55 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.65 ; ± 0.25 pH at pH 6.65 - 7.15 (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 LG1-2239-01 (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 ± 0.02, 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: 03166168 (Biolector 0067)
Calibration phase offset	pH -360.53 (pH Ser. 3513, gain 8)
Date of calibration	2024-03-20

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

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

DO calibration parameters Lot No.2402201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1943	-1904	-1865	-1826	-1788	-1749	-1710
B	14988	14683	14378	14073	13768	13464	13159
C	-13262	-12986	-12710	-12434	-12158	-11882	-11606

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1671	-1633	-1594	-1555	-1516	-1478	-1439
B	12854	12549	12244	11940	11635	11330	11025
C	-11330	-11054	-10778	-10502	-10226	-9950	-9674

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1400	-1361	-1323	-1284	-1245	-1206	-1168
B	10720	10416	10111	9806	9501	9196	8891
C	-9398	-9122	-8846	-8569	-8293	-8017	-7741

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-232551421 (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: 03166168 (Biolector 0067)
Calibration phase offset	DO -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2024-03-20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5043
Date of sterilization	2024-03-08

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