

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

pH calibration parameters Lot No.2405201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.60	70.53	70.46	70.39	70.32	70.24	70.17
φ max	25.12	25.06	24.99	24.93	24.86	24.80	24.74
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH ₀	6.05	6.04	6.02	6.01	6.00	5.99	5.97

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.10	70.03	69.96	69.89	69.81	69.74	69.67
φ max	24.67	24.61	24.54	24.48	24.42	24.35	24.29
dpH	0.72	0.72	0.72	0.72	0.71	0.71	0.71
pH ₀	5.96	5.95	5.93	5.92	5.91	5.90	5.88

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.60	69.53	69.46	69.38	69.31	69.24	69.17
φ max	24.22	24.16	24.10	24.03	23.97	23.90	23.84
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.87	5.86	5.84	5.83	5.82	5.81	5.79

pH sensor properties

Dynamic range	pH 3.65 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.90 ; ± 0.1 pH at pH 4.90 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.20 (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	2024-05-10

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.2405201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1656	-1627	-1598	-1570	-1541	-1512	-1483
B	12699	12475	12250	12026	11801	11576	11352
C	-11156	-10955	-10753	-10551	-10350	-10148	-9946

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1455	-1426	-1397	-1368	-1339	-1311	-1282
B	11127	10902	10678	10453	10228	10004	9779
C	-9745	-9543	-9341	-9140	-8938	-8736	-8535

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1253	-1224	-1196	-1167	-1138	-1109	-1081
B	9554	9330	9105	8880	8656	8431	8207
C	-8333	-8131	-7930	-7728	-7526	-7325	-7123

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-232551425+26 (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	2024-05-10

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5285
Date of sterilization	2024-04-30

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