

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

pH calibration parameters Lot No.2401201 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.94	69.86	69.78	69.70	69.62	69.54	69.46
φ max	24.70	24.63	24.55	24.48	24.41	24.33	24.26
dpH	0.74	0.74	0.74	0.74	0.74	0.74	0.74
pH ₀	6.09	6.08	6.06	6.05	6.04	6.02	6.01

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.39	69.31	69.23	69.15	69.07	68.99	68.91
φ max	24.18	24.11	24.03	23.96	23.88	23.81	23.73
dpH	0.74	0.74	0.73	0.73	0.73	0.73	0.73
pH ₀	6.00	5.98	5.97	5.96	5.94	5.93	5.92

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.83	68.76	68.68	68.60	68.52	68.44	68.36
φ max	23.66	23.58	23.51	23.44	23.36	23.29	23.21
dpH	0.73	0.73	0.73	0.73	0.73	0.73	0.73
pH ₀	5.90	5.89	5.88	5.86	5.85	5.84	5.82

pH sensor properties

Dynamic range	pH 3.65 - 8.05
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.95 ; ± 0.1 pH at pH 4.95 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.25 (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	2024-02-15

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.2401201 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1740	-1708	-1675	-1642	-1610	-1577	-1544
B	13368	13112	12857	12601	12345	12089	11833
C	-11767	-11536	-11306	-11075	-10845	-10614	-10383

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1512	-1479	-1446	-1414	-1381	-1348	-1316
B	11577	11321	11065	10809	10554	10298	10042
C	-10153	-9922	-9691	-9461	-9230	-9000	-8769

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1283	-1250	-1218	-1185	-1152	-1120	-1087
B	9786	9530	9274	9018	8762	8507	8251
C	-8538	-8308	-8077	-7846	-7616	-7385	-7155

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-232551419+20 (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	2024-02-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4871
Date of sterilization	2024-02-02

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