

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

pH calibration parameters Lot No.2202227 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	72.08	71.98	71.88	71.78	71.68	71.59	71.49
ϕ max	23.15	23.09	23.02	22.95	22.89	22.82	22.76
dpH	0.71	0.71	0.71	0.70	0.70	0.70	0.70
pH ₀	5.96	5.95	5.94	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	71.39	71.29	71.19	71.09	71.00	70.90	70.80
ϕ max	22.69	22.62	22.56	22.49	22.43	22.36	22.29
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.88	5.87	5.86	5.85	5.83	5.82	5.81

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	70.70	70.60	70.51	70.41	70.31	70.21	70.11
ϕ max	22.23	22.16	22.10	22.03	21.96	21.90	21.83
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.80	5.79	5.78	5.77	5.75	5.74	5.73

pH sensor properties

Dynamic range	pH 3.55 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.20 (batch calibration)
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 = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.80 (pH Ser. 3513, gain 8)
Date of calibration	2022-02-28

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.2202227 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1666	-1644	-1622	-1601	-1579	-1557	-1535
B	12787	12619	12450	12281	12113	11944	11776
C	-11243	-11093	-10943	-10793	-10643	-10493	-10342

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1514	-1492	-1470	-1449	-1427	-1405	-1383
B	11607	11438	11270	11101	10933	10764	10595
C	-10192	-10042	-9892	-9742	-9592	-9442	-9292

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1362	-1340	-1318	-1296	-1275	-1253	-1231
B	10427	10258	10090	9921	9752	9584	9415
C	-9142	-8992	-8842	-8692	-8541	-8391	-8241

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-2135500642 (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 OC buffer)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.88 (DO Ser. 4452, gain 4)
Date of calibration	2022-02-28

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1001695
Date of sterilization	2022-02-16

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