

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

pH calibration parameters Lot No.2205221 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.40	72.30	72.21	72.11	72.01	71.91	71.81
φ max	24.22	24.15	24.07	24.00	23.93	23.86	23.79
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.95	5.94	5.93	5.91	5.90	5.89	5.88

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.72	71.62	71.52	71.42	71.32	71.23	71.13
φ max	23.72	23.65	23.58	23.51	23.44	23.36	23.29
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.87	5.86	5.85	5.84	5.83	5.81	5.80

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.03	70.93	70.84	70.74	70.64	70.54	70.44
φ max	23.22	23.15	23.08	23.01	22.94	22.87	22.80
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.79	5.78	5.77	5.76	5.75	5.74	5.73

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 - 4.70 ; ± 0.1 pH at pH 4.70 - 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 LG1-2141-01 (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 Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.79 (pH Ser. 3513, gain 8)
Date of calibration	2022-05-04

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.2205221 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1797	-1763	-1729	-1695	-1662	-1628	-1594
B	13849	13584	13318	13053	12787	12522	12256
C	-12238	-11998	-11759	-11519	-11279	-11040	-10800

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1560	-1526	-1492	-1458	-1425	-1391	-1357
B	11991	11725	11460	11194	10929	10663	10397
C	-10560	-10321	-10081	-9842	-9602	-9362	-9123

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1323	-1289	-1255	-1221	-1188	-1154	-1120
B	10132	9866	9601	9335	9070	8804	8539
C	-8883	-8644	-8404	-8164	-7925	-7685	-7445

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-213550644 (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 = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1029868
Date of sterilization	2022-04-26

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