

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

**pH calibration parameters Lot No.2208211 and 2208217 (BioLector XT Microbioreactor, filter module ID-521)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.03	71.94	71.85	71.76	71.67	71.58	71.49
φ max	23.36	23.28	23.20	23.12	23.04	22.96	22.88
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH <sub>0</sub>	6.03	6.01	6.00	5.99	5.98	5.97	5.95

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.40	71.31	71.22	71.13	71.04	70.95	70.86
φ max	22.80	22.73	22.65	22.57	22.49	22.41	22.33
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.72
pH <sub>0</sub>	5.94	5.93	5.92	5.91	5.89	5.88	5.87

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.77	70.68	70.59	70.50	70.42	70.33	70.24
φ max	22.25	22.17	22.09	22.01	21.93	21.85	21.77
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH <sub>0</sub>	5.86	5.85	5.84	5.82	5.81	5.80	5.79

#### pH sensor properties

Dynamic range	pH 3.60 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30 - 4.75 ; ± 0.1 pH at pH 4.75 - 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 LG1-2141-01 (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-MF32-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-08-09

#### 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](http://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.2208211 and 2208217 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1828	-1790	-1753	-1715	-1678	-1640	-1603
B	14087	13791	13495	13199	12903	12608	12312
C	-12447	-12178	-11909	-11641	-11372	-11103	-10835

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1565	-1528	-1490	-1453	-1415	-1378	-1340
B	12016	11720	11424	11128	10832	10537	10241
C	-10566	-10297	-10028	-9760	-9491	-9222	-8954

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1303	-1265	-1228	-1190	-1153	-1115	-1078
B	9945	9649	9353	9057	8761	8465	8170
C	-8685	-8416	-8147	-7879	-7610	-7341	-7073

**DO sensor properties**

Dynamic range	0 - 100 % oxygen
Resolution	Up to 0.1 % O <sub>2</sub> (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O <sub>2</sub> per day (sampling interval of 6 min)
Response time (t <sub>90</sub> )	< 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-221155395 (at least stable for 7 days with CertiPUR-buffer) <b>DO sensors are light-sensitive; please protect them from direct light!</b>

**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-MF32-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-08-09

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1064096
Date of sterilization	2022-07-28

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