

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

**pH calibration parameters Lot No.2310201 (BioLector XT Microbioreactor, filter module ID-521)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.27	72.14	72.00	71.87	71.74	71.60	71.47
φ max	23.40	23.27	23.13	23.00	22.86	22.72	22.59
dpH	0.68	0.68	0.68	0.69	0.69	0.69	0.69
pH <sub>0</sub>	5.84	5.82	5.81	5.80	5.79	5.77	5.76

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.33	71.20	71.07	70.93	70.80	70.66	70.53
φ max	22.45	22.31	22.18	22.04	21.91	21.77	21.63
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH <sub>0</sub>	5.75	5.74	5.73	5.71	5.70	5.69	5.68

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.39	70.26	70.13	69.99	69.86	69.72	69.59
φ max	21.50	21.36	21.22	21.09	20.95	20.81	20.68
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH <sub>0</sub>	5.66	5.65	5.64	5.63	5.62	5.60	5.59

#### pH sensor properties

Dynamic range	pH 3.50 - 7.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15 - 4.60 ; ± 0.1 pH at pH 4.60 - 6.50 ; ± 0.25 pH at pH 6.50 - 6.95 (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 LG1-2239-02 (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 = 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: 03624969 (BLXT Pilot 7)
Calibration phase offset	pH -360.53 (pH Ser. 3513, gain 8)
Date of calibration	2023-06-23

#### 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.2310201 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1748	-1708	-1668	-1628	-1588	-1548	-1508
B	13445	13131	12817	12503	12189	11875	11561
C	-11857	-11573	-11289	-11005	-10721	-10437	-10153

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1468	-1428	-1388	-1348	-1308	-1268	-1228
B	11247	10933	10619	10305	9991	9677	9363
C	-9869	-9585	-9301	-9017	-8733	-8449	-8165

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1188	-1148	-1108	-1068	-1028	-988	-948
B	9049	8735	8420	8106	7792	7478	7164
C	-7881	-7597	-7313	-7029	-6745	-6461	-6177

#### 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-232051035 (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: 03624969 (BLXT Pilot 7)
Calibration phase offset	DO -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2023-06-23

#### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3778
Date of sterilization	2023-06-12

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