

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

**pH calibration parameters Lot No.2205301 (BioLector XT Microbioreactor, filter module ID-524)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.87	70.98	71.09	71.19	71.30	71.40	71.51
φ max	14.71	14.75	14.80	14.84	14.88	14.92	14.97
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH <sub>0</sub>	5.35	5.35	5.34	5.34	5.33	5.33	5.32

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.61	71.72	71.83	71.93	72.04	72.14	72.25
φ max	15.01	15.05	15.09	15.14	15.18	15.22	15.27
dpH	-0.40	-0.40	-0.40	-0.39	-0.39	-0.39	-0.39
pH <sub>0</sub>	5.31	5.31	5.30	5.30	5.29	5.29	5.28

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	72.35	72.46	72.57	72.67	72.78	72.88	72.99
φ max	15.31	15.35	15.39	15.44	15.48	15.52	15.56
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.38	-0.38
pH <sub>0</sub>	5.28	5.27	5.27	5.26	5.26	5.25	5.24

**pH sensor properties**

Dynamic range	pH 3.80 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	#NV
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 pH51-214250699+700 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.12 (pH Ser. 3587, gain 6)
Date of calibration	2022-05-05

**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.2205301 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1614	-1587	-1560	-1532	-1505	-1478	-1450
B	12382	12169	11956	11743	11530	11317	11105
C	-10877	-10686	-10496	-10305	-10114	-9923	-9732

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1423	-1396	-1369	-1341	-1314	-1287	-1259
B	10892	10679	10466	10253	10040	9827	9614
C	-9541	-9350	-9160	-8969	-8778	-8587	-8396

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1232	-1205	-1178	-1150	-1123	-1096	-1068
B	9401	9188	8975	8763	8550	8337	8124
C	-8205	-8014	-7823	-7633	-7442	-7251	-7060

**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-213550644 (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 <i>OC</i> buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-05

**Sterilization procedure**

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

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