

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

**pH calibration parameters Lot No.2203301 (BioLector XT Microbioreactor, filter module ID-524)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	61.59	61.76	61.92	62.08	62.24	62.40	62.57
φ max	7.28	7.30	7.31	7.33	7.34	7.36	7.37
dpH	-0.42	-0.42	-0.42	-0.42	-0.41	-0.41	-0.41
pH <sub>0</sub>	5.67	5.66	5.66	5.65	5.65	5.64	5.63

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.73	62.89	63.05	63.21	63.38	63.54	63.70
φ max	7.38	7.40	7.41	7.43	7.44	7.46	7.47
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.40
pH <sub>0</sub>	5.63	5.62	5.62	5.61	5.61	5.60	5.60

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.86	64.02	64.19	64.35	64.51	64.67	64.83
φ max	7.48	7.50	7.51	7.53	7.54	7.56	7.57
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH <sub>0</sub>	5.59	5.59	5.58	5.58	5.57	5.56	5.56

**pH sensor properties**

Dynamic range	pH 4.10 - 6.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.45 - 4.60 ; ± 0.1 pH at pH 4.60 - 6.35 ; ± 0.25 pH at pH 6.35 - 6.55 (batch calibration)
Response time (t <sub>90</sub> )	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 pH51-202850566+567 (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 -360.99 (pH Ser. 3587, gain 6)
Date of calibration	2022-03-10

**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.2203301 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-2267	-2214	-2160	-2107	-2054	-2000	-1947
B	17589	17168	16746	16324	15903	15481	15060
C	-15663	-15279	-14894	-14510	-14126	-13742	-13357

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1894	-1841	-1787	-1734	-1681	-1627	-1574
B	14638	14216	13795	13373	12952	12530	12109
C	-12973	-12589	-12205	-11820	-11436	-11052	-10668

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1521	-1468	-1414	-1361	-1308	-1254	-1201
B	11687	11265	10844	10422	10001	9579	9157
C	-10283	-9899	-9515	-9131	-8746	-8362	-7978

**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-213550642 (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_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 -360.83 (DO Ser. 4452, gain 4)
Date of calibration	2022-03-10

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1004997
Date of sterilization	2022-02-23

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