

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

**pH calibration parameters Lot No.2212201+2212207 (BioLector XT Microbioreactor, filter module ID-521)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.99	72.87	72.76	72.65	72.53	72.42	72.31
φ max	24.86	24.76	24.66	24.55	24.45	24.35	24.25
dpH	0.66	0.66	0.66	0.67	0.67	0.67	0.67
pH <sub>0</sub>	5.88	5.87	5.86	5.85	5.84	5.83	5.82

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	72.19	72.08	71.97	71.85	71.74	71.62	71.51
φ max	24.15	24.05	23.95	23.84	23.74	23.64	23.54
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH <sub>0</sub>	5.82	5.81	5.80	5.79	5.78	5.77	5.77

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.40	71.28	71.17	71.06	70.94	70.83	70.71
φ max	23.44	23.34	23.24	23.14	23.03	22.93	22.83
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH <sub>0</sub>	5.76	5.75	5.74	5.73	5.72	5.71	5.71

**pH sensor properties**

Dynamic range	pH 3.55 - 7.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20 - 4.65 ; ± 0.1 pH at pH 4.65 - 6.60 ; ± 0.25 pH at pH 6.60 - 7.05 (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 = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Well Plate (MTP-R48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-09-23

**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

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

**DO calibration parameters Lot No.2212201+2212207 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1770	-1735	-1701	-1666	-1631	-1596	-1562
B	13634	13362	13089	12816	12544	12271	11998
C	-12040	-11793	-11547	-11300	-11054	-10807	-10561

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1527	-1492	-1458	-1423	-1388	-1354	-1319
B	11726	11453	11180	10908	10635	10362	10090
C	-10314	-10068	-9821	-9575	-9328	-9082	-8835

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1284	-1249	-1215	-1180	-1145	-1111	-1076
B	9817	9544	9272	8999	8726	8454	8181
C	-8588	-8342	-8095	-7849	-7602	-7356	-7109

**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- 221155398 (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 = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Well Plate (MTP-R48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-09-23

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-07

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