

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

**pH calibration parameters Lot No.2301101 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.76	63.70	63.64	63.58	63.52	63.46	63.40
φ max	13.90	13.91	13.92	13.93	13.94	13.95	13.97
dpH	0.54	0.54	0.54	0.54	0.54	0.55	0.55
pH <sub>0</sub>	6.58	6.57	6.57	6.56	6.56	6.55	6.55

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.34	63.28	63.22	63.15	63.09	63.03	62.97
φ max	13.98	13.99	14.00	14.01	14.02	14.03	14.04
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.54	6.54	6.53	6.53	6.52	6.52	6.51

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.91	62.85	62.79	62.73	62.67	62.61	62.55
φ max	14.05	14.06	14.08	14.09	14.10	14.11	14.12
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.51	6.50	6.50	6.49	6.49	6.48	6.48

**pH sensor properties**

Dynamic range	pH 4.65 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10 - 5.40 ; ± 0.1 pH at pH 5.40 - 7.30 ; ± 0.25 pH at pH 7.30 - 7.60 (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 HP8-2148-01 (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 3.00 ± 0.02 / pH 4.00 ± 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_BOH1 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.32 (pH Ser. 3567, gain 7)
Date of calibration	2023-02-07

**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.2301101 (BioLector XT Microbioreactor, filter module ID-503)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-5448	-5372	-5297	-5221	-5145	-5070	-4994
B	43060	42461	41863	41264	40665	40067	39468
C	-39205	-38659	-38112	-37565	-37019	-36472	-35925

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-4919	-4843	-4768	-4692	-4617	-4541	-4466
B	38869	38271	37672	37073	36474	35876	35277
C	-35379	-34832	-34285	-33739	-33192	-32646	-32099

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-4390	-4314	-4239	-4163	-4088	-4012	-3937
B	34678	34080	33481	32882	32284	31685	31086
C	-31552	-31006	-30459	-29912	-29366	-28819	-28273

**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 PSt3-HG-1921-01_5 (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_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.87 (DO Ser. 4446, gain 7)
Date of calibration	2023-02-07

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3310
Date of sterilization	2023-01-26

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