

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

**pH calibration parameters Lot No.2402101 (BioLector XT Microbioreactor, filter module ID-502)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.48	62.41	62.34	62.27	62.20	62.13	62.06
φ max	14.10	14.12	14.14	14.16	14.18	14.20	14.22
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.48	6.47	6.47	6.46	6.46	6.45	6.44

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.98	61.91	61.84	61.77	61.70	61.63	61.56
φ max	14.24	14.26	14.27	14.29	14.31	14.33	14.35
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.44	6.43	6.43	6.42	6.42	6.41	6.40

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.49	61.42	61.35	61.28	61.21	61.13	61.06
φ max	14.37	14.39	14.41	14.43	14.45	14.46	14.48
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH <sub>0</sub>	6.40	6.39	6.39	6.38	6.38	6.37	6.37

**pH sensor properties**

Dynamic range	pH 4.60 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.05 - 5.30 ; ± 0.1 pH at pH 5.30 - 7.15 ; ± 0.25 pH at pH 7.15 - 7.45 (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 HP8-2211-01 (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 ± 0.02, 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: 03166168 (Biolector 0067)
Calibration phase offset	pH -1.70 (pH Ser. 3567, gain 7)
Date of calibration	2024-03-21

**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.2402101 (BioLector XT Microbioreactor, filter module ID-503)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-5145	-5050	-4956	-4861	-4767	-4672	-4578
B	40624	39874	39124	38373	37623	36873	36122
C	-36942	-36255	-35568	-34881	-34194	-33507	-32820

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-4483	-4389	-4295	-4200	-4106	-4011	-3917
B	35372	34622	33871	33121	32371	31621	30870
C	-32134	-31447	-30760	-30073	-29386	-28699	-28012

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3822	-3728	-3633	-3539	-3444	-3350	-3255
B	30120	29370	28619	27869	27119	26368	25618
C	-27326	-26639	-25952	-25265	-24578	-23891	-23204

**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) <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_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: 03166168 (BioLector 0067)
Calibration phase offset	DO -360.66 (DO Ser. 4446, gain 7)
Date of calibration	2024-03-21

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4871
Date of sterilization	2024-03-08

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