

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

**pH calibration parameters Lot No.2404201+2404281 (BioLector XT Microbioreactor, filter module ID-521)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.18	70.10	70.02	69.93	69.85	69.77	69.69
φ max	25.85	25.76	25.67	25.58	25.50	25.41	25.32
dpH	0.73	0.73	0.73	0.73	0.73	0.73	0.73
pH <sub>0</sub>	6.10	6.08	6.07	6.06	6.04	6.03	6.02

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.61	69.52	69.44	69.36	69.28	69.19	69.11
φ max	25.23	25.14	25.05	24.96	24.87	24.78	24.69
dpH	0.73	0.73	0.73	0.72	0.72	0.72	0.72
pH <sub>0</sub>	6.00	5.99	5.97	5.96	5.95	5.93	5.92

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.03	68.95	68.87	68.78	68.70	68.62	68.54
φ max	24.60	24.51	24.42	24.33	24.24	24.15	24.06
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH <sub>0</sub>	5.91	5.89	5.88	5.86	5.85	5.84	5.82

**pH sensor properties**

Dynamic range	pH 3.70 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.45 - 5.00 ; ± 0.1 pH at pH 5.00 - 6.65 ; ± 0.25 pH at pH 6.65 - 7.15 (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 LG1-2239-01 (at least stable for 7 days with CertiPUR-buffer) <b>pH sensors are light-sensitive; please protect them from direct light!</b>

**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 ± 0.02, 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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166168 (BioLector 0067)
Calibration phase offset	pH -361.07 (pH Ser. 3513, gain 8)
Date of calibration	2024-05-07

**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

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

**DO calibration parameters Lot No.2404201+2404281 (BioLector XT Microbioreactor, filter module ID-528)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1810	-1772	-1734	-1696	-1658	-1620	-1581
B	13927	13628	13329	13030	12730	12431	12132
C	-12283	-12012	-11742	-11472	-11201	-10931	-10661

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1543	-1505	-1467	-1429	-1391	-1353	-1315
B	11833	11533	11234	10935	10636	10337	10037
C	-10391	-10120	-9850	-9580	-9309	-9039	-8769

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1277	-1238	-1200	-1162	-1124	-1086	-1048
B	9738	9439	9140	8840	8541	8242	7943
C	-8498	-8228	-7958	-7687	-7417	-7147	-6876

**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-232551424+25 (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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166168 (Biolector 0067)
Calibration phase offset	DO -361.10 (DO Ser. 4452, gain 4)
Date of calibration	2024-05-07

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5227
Date of sterilization	2024-04-17

**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