

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

**pH calibration parameters Lot No.2210121 (BioLector II/Pro Microbioreactor, filter module ID-202/402)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	63.35	63.27	63.19	63.11	63.03	62.95	62.87
φ max	15.01	15.02	15.02	15.03	15.04	15.05	15.05
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.52
pH <sub>0</sub>	6.65	6.65	6.64	6.64	6.63	6.63	6.62

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.79	62.71	62.63	62.55	62.47	62.39	62.31
φ max	15.06	15.07	15.07	15.08	15.09	15.10	15.10
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH <sub>0</sub>	6.62	6.61	6.61	6.60	6.60	6.59	6.59

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	62.23	62.15	62.07	61.99	61.91	61.83	61.75
φ max	15.11	15.12	15.12	15.13	15.14	15.15	15.15
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH <sub>0</sub>	6.58	6.58	6.57	6.57	6.56	6.56	6.55

**pH sensor properties**

Dynamic range	pH 3.90 - 8.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 5.15 ; ± 0.1 pH at pH 5.15 - 7.45 ; ± 0.25 pH at pH 7.45 - 7.90 (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 HP8-2148-01 (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 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 = MF_pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-08-30

**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.2210121 (BioLector II/Pro Microbioreactor, filter module ID-203/403)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	73.82	73.77	73.73	73.68	73.64	73.60	73.55
φ cal100	42.39	42.16	41.93	41.70	41.47	41.24	41.00

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.51	73.47	73.42	73.38	73.33	73.29	73.25
φ cal100	40.77	40.54	40.31	40.08	39.85	39.62	39.39

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	73.20	73.16	73.12	73.07	73.03	72.98	72.94
φ cal100	39.16	38.93	38.70	38.47	38.24	38.01	37.77

### DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
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	Two-point calibration at an oxygen-free environment (1.0 M sulfite system) and an air-saturated environment (21% oxygen with QC buffer)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 μL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-08-30

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

### 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