

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

**pH calibration parameters Lot No.2206221 + 2206227 (BioLector II/Pro Microbioreactor, filter module ID-221/421)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
$\phi$ min	72.32	72.24	72.15	72.07	71.99	71.90	71.82
$\phi$ max	22.70	22.65	22.60	22.55	22.50	22.45	22.40
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH <sub>0</sub>	5.90	5.89	5.88	5.86	5.85	5.84	5.83

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
$\phi$ min	71.74	71.66	71.57	71.49	71.41	71.32	71.24
$\phi$ max	22.35	22.30	22.25	22.20	22.15	22.10	22.05
dpH	0.76	0.76	0.76	0.76	0.76	0.76	0.76
pH <sub>0</sub>	5.82	5.81	5.80	5.79	5.78	5.76	5.75

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
$\phi$ min	71.16	71.08	70.99	70.91	70.83	70.75	70.66
$\phi$ max	22.00	21.95	21.90	21.85	21.80	21.75	21.70
dpH	0.75	0.75	0.75	0.75	0.75	0.75	0.75
pH <sub>0</sub>	5.74	5.73	5.72	5.71	5.70	5.69	5.67

### pH sensor properties

Dynamic range	pH 3.30 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05 - 4.55 ; ± 0.1 pH at pH 4.55 - 6.65 ; ± 0.25 pH at pH 6.65 - 7.20 (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) <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 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.79 (pH Ser. 3513, gain 8)
Date of calibration	2022-05-16

### 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.2206221 + 2206227 (BioLector II/Pro Microbioreactor, filter module ID-228/428)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.83	70.81	70.79	70.77	70.75	70.73	70.71
φ cal100	41.12	40.92	40.72	40.53	40.33	40.13	39.94

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.69	70.67	70.65	70.63	70.61	70.59	70.57
φ cal100	39.74	39.54	39.35	39.15	38.95	38.76	38.56

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.55	70.53	70.51	70.49	70.47	70.45	70.43
φ cal100	38.36	38.17	37.97	37.77	37.58	37.38	37.18

### 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 RF-221155393 (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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-16

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1035388
Date of sterilization	2022-05-10

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