

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

**pH calibration parameters Lot No.2116321 (BioLector II/Pro Microbioreactor, filter module ID-424)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
$\phi$ min	62.60	62.79	62.98	63.16	63.35	63.54	63.72
$\phi$ max	9.75	9.78	9.80	9.83	9.85	9.88	9.90
d $\phi$ H	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH <sub>0</sub>	5.44	5.44	5.43	5.43	5.42	5.42	5.42

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
$\phi$ min	63.91	64.10	64.28	64.47	64.66	64.84	65.03
$\phi$ max	9.92	9.95	9.97	10.00	10.02	10.04	10.07
d $\phi$ H	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH <sub>0</sub>	5.41	5.41	5.40	5.40	5.40	5.39	5.39

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
$\phi$ min	65.22	65.40	65.59	65.78	65.96	66.15	66.34
$\phi$ max	10.09	10.12	10.14	10.17	10.19	10.21	10.24
d $\phi$ H	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH <sub>0</sub>	5.38	5.38	5.38	5.37	5.37	5.36	5.36

**pH sensor properties**

Dynamic range	pH 3.95 - 6.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25-4.40; ± 0.1 pH at pH 4.40-6.15; ± 0.25 pH at pH 6.15-6.30 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 pH51-202850554 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2021-12-03

**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.2116321 (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	70.07	70.06	70.04	70.02	70.01	69.99	69.98
φ cal100	41.18	41.01	40.84	40.67	40.50	40.33	40.16

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.96	69.94	69.93	69.91	69.90	69.88	69.87
φ cal100	39.99	39.82	39.65	39.48	39.31	39.14	38.97

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.85	69.83	69.82	69.80	69.79	69.77	69.76
φ cal100	38.80	38.63	38.46	38.29	38.12	37.95	37.78

**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-213550639 (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	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-12-03

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	972085
Date of sterilization	2021-11-25

**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