

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

**pH calibration parameters Lot No.2209301 (BioLector II/Pro Microbioreactor, filter module ID-424)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	67.43	67.56	67.69	67.82	67.96	68.09	68.22
φ max	15.57	15.61	15.65	15.68	15.72	15.76	15.79
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH <sub>0</sub>	5.29	5.28	5.28	5.27	5.27	5.26	5.26

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.35	68.48	68.61	68.74	68.87	69.01	69.14
φ max	15.83	15.87	15.90	15.94	15.98	16.01	16.05
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH <sub>0</sub>	5.25	5.25	5.24	5.24	5.23	5.23	5.22

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.27	69.40	69.53	69.66	69.79	69.93	70.06
φ max	16.09	16.12	16.16	16.20	16.24	16.27	16.31
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH <sub>0</sub>	5.22	5.21	5.21	5.20	5.20	5.19	5.19

**pH sensor properties**

Dynamic range	pH 3.85 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15-4.35; ± 0.1 pH at pH 4.35-6.05; ± 0.25 pH at pH 6.05-6.20 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 pH51-211650285 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2022-08-19

**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.2209301 (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	70.64	70.63	70.62	70.61	70.60	70.59	70.58
ϕ cal100	41.04	40.92	40.79	40.67	40.54	40.42	40.29

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.57	70.56	70.55	70.54	70.53	70.52	70.51
ϕ cal100	40.17	40.04	39.92	39.79	39.67	39.55	39.42

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.50	70.49	70.48	70.47	70.46	70.45	70.44
ϕ cal100	39.30	39.17	39.05	38.92	38.80	38.67	38.55

**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-221155396 (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	1.0 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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2022-08-19

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1065724
Date of sterilization	2022-08-01

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