

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

**pH calibration parameters Lot No.2305201 (BioLector® II/Pro, filter module ID-221/-421)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.95	69.88	69.82	69.75	69.68	69.61	69.54
φ max	23.79	23.74	23.69	23.64	23.59	23.54	23.48
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH <sub>0</sub>	5.94	5.93	5.92	5.91	5.90	5.89	5.88

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.48	69.41	69.34	69.27	69.20	69.14	69.07
φ max	23.43	23.38	23.33	23.28	23.23	23.18	23.12
dpH	0.72	0.72	0.72	0.72	0.72	0.72	0.72
pH <sub>0</sub>	5.86	5.85	5.84	5.83	5.82	5.81	5.79

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.00	68.93	68.87	68.80	68.73	68.66	68.59
φ max	23.07	23.02	22.97	22.92	22.87	22.82	22.77
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH <sub>0</sub>	5.78	5.77	5.76	5.75	5.74	5.72	5.71

**pH sensor properties**

Dynamic range	pH 3.55 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30-4.80; ± 0.1 pH at pH 4.80-6.55; ± 0.25 pH at pH 6.55-7.05 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 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 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2023-03-28

**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.2305201 (BioLector® II/Pro, filter module ID-228/-428)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.53	70.51	70.49	70.47	70.45	70.43	70.41
φ cal100	41.26	41.07	40.88	40.69	40.50	40.31	40.12

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.39	70.37	70.35	70.33	70.31	70.29	70.27
φ cal100	39.93	39.74	39.55	39.36	39.17	38.98	38.79

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.25	70.23	70.21	70.19	70.17	70.15	70.13
φ cal100	38.60	38.41	38.22	38.03	37.84	37.65	37.46

### 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-230250059 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-03-28

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3541
Date of sterilization	2023-03-22

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