

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

**pH calibration parameters Lot No.2307101 (BioLector I Microbioreactor, filter module ID-102/-302)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
$\phi$ min	56.17	56.10	56.03	55.96	55.89	55.82	55.75
$\phi$ max	13.51	13.52	13.52	13.53	13.53	13.54	13.54
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.56	6.55	6.55	6.54	6.54	6.53	6.53

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
$\phi$ min	55.68	55.61	55.54	55.47	55.40	55.33	55.26
$\phi$ max	13.55	13.55	13.56	13.56	13.57	13.57	13.58
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.52	6.52	6.51	6.50	6.50	6.49	6.49

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
$\phi$ min	55.19	55.12	55.05	54.98	54.91	54.84	54.77
$\phi$ max	13.58	13.59	13.59	13.60	13.60	13.61	13.61
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.48	6.48	6.47	6.46	6.46	6.45	6.45

**pH sensor properties**

Dynamic range	pH 4.70 - 8.05
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15-5.50; ± 0.1 pH at pH 5.50-7.20; ± 0.25 pH at pH 7.20-7.55 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 HP8-2148-01_2 (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 Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	pH 255.90 (pH Ser. 3403, gain 55)
Date of calibration	2023-05-05

**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.2307101 (BioLector I Microbioreactor, filter module ID-103/-303)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.88	72.82	72.75	72.69	72.62	72.56	72.49
φ cal100	42.47	42.28	42.08	41.89	41.69	41.50	41.31

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.43	72.37	72.30	72.24	72.17	72.11	72.05
φ cal100	41.11	40.92	40.72	40.53	40.33	40.14	39.95

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.98	71.92	71.85	71.79	71.72	71.66	71.60
φ cal100	39.75	39.56	39.36	39.17	38.98	38.78	38.59

**DO sensor properties**

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % 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	1.0 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	DO 332.50 (DO Ser. 3402, gain 70)
Date of calibration	2023-05-05

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2023-04-18

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