

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

**pH calibration parameters Lot No.2304311 (BioLector Pro Microbioreactor, filter module ID-424)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	75.17	75.24	75.30	75.37	75.44	75.51	75.57
φ max	20.99	21.05	21.10	21.15	21.20	21.25	21.30
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH <sub>0</sub>	5.20	5.20	5.19	5.18	5.17	5.17	5.16

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	75.64	75.71	75.78	75.84	75.91	75.98	76.05
φ max	21.35	21.41	21.46	21.51	21.56	21.61	21.66
dpH	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40	-0.40
pH <sub>0</sub>	5.15	5.14	5.14	5.13	5.12	5.11	5.11

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	76.12	76.18	76.25	76.32	76.39	76.45	76.52
φ max	21.71	21.77	21.82	21.87	21.92	21.97	22.02
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH <sub>0</sub>	5.10	5.09	5.08	5.08	5.07	5.06	5.05

#### pH sensor properties

Dynamic range	pH 3.60 - 6.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95-4.15; ± 0.1 pH at pH 4.15-5.85; ± 0.25 pH at pH 5.85-6.05 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 2211553833+384+392 (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-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2023-03-16

#### 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.2304311 (BioLector Pro Microbioreactor, filter module ID-228/-428)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	69.82	69.80	69.78	69.76	69.74	69.72	69.70
φ cal100	40.83	40.66	40.49	40.32	40.15	39.98	39.81

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.68	69.66	69.64	69.62	69.60	69.58	69.56
φ cal100	39.64	39.47	39.30	39.13	38.96	38.79	38.62

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.54	69.52	69.50	69.48	69.47	69.45	69.43
φ cal100	38.45	38.28	38.11	37.94	37.77	37.60	37.43

### 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-230250060 (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 = Microfluidic Flower Plate (MTP-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-03-16

### Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3482
Date of sterilization	2023-03-09

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