

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

pH calibration parameters Lot No.2316301 (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	76.20	76.27	76.34	76.41	76.48	76.55	76.62
φ max	22.25	22.31	22.37	22.42	22.48	22.54	22.60
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.24	5.23	5.23	5.22	5.21	5.21	5.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	76.69	76.76	76.83	76.90	76.97	77.04	77.11
φ max	22.65	22.71	22.77	22.82	22.88	22.94	23.00
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.19	5.19	5.18	5.17	5.17	5.16	5.15

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	77.18	77.25	77.32	77.39	77.46	77.53	77.60
φ max	23.05	23.11	23.17	23.22	23.28	23.34	23.40
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.15	5.14	5.13	5.13	5.12	5.11	5.11

pH sensor properties

Dynamic range	pH 3.70 - 6.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00-4.20; ± 0.1 pH at pH 4.20-5.90; ± 0.25 pH at pH 5.90-6.10 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 pH51-230250067 (at least stable for 7 days with CertiPUR-buffer) pH sensors are light-sensitive; please protect them from direct light!

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	2023-11-16

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
- 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.2316301 (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	70.35	70.33	70.30	70.27	70.25	70.22	70.20
ϕ cal100	41.70	41.52	41.33	41.15	40.96	40.77	40.59

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.17	70.15	70.12	70.10	70.07	70.04	70.02
ϕ cal100	40.40	40.22	40.03	39.85	39.66	39.47	39.29

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.99	69.97	69.94	69.92	69.89	69.87	69.84
ϕ cal100	39.10	38.92	38.73	38.55	38.36	38.17	37.99

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O ₂ (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O ₂ per day (sampling interval of 6 min)
Response time (t ₉₀)	< 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-232551418 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

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	2023-11-16

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4534
Date of sterilization	2023-11-08

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