

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

pH calibration parameters Lot No.2309321 and 2309327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	74.82	74.89	74.97	75.04	75.11	75.19	75.26
φ max	22.88	22.93	22.98	23.03	23.08	23.13	23.18
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.15	5.14	5.14	5.13	5.12	5.12	5.11

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	75.33	75.41	75.48	75.55	75.63	75.70	75.77
φ max	23.23	23.28	23.33	23.38	23.43	23.48	23.53
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.11	5.10	5.09	5.09	5.08	5.08	5.07

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	75.85	75.92	76.00	76.07	76.14	76.22	76.29
φ max	23.58	23.63	23.68	23.73	23.78	23.83	23.89
dpH	-0.39	-0.39	-0.39	-0.38	-0.38	-0.38	-0.38
pH ₀	5.06	5.06	5.05	5.05	5.04	5.03	5.03

pH sensor properties

Dynamic range	pH 3.60 - 6.30
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90-4.10; ± 0.1 pH at pH 4.10-5.80; ± 0.25 pH at pH 5.80-6.00 batch calibration
Response time (t ₉₀)	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 pH51-221155390+391 (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 = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2023-06-23

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.2309321 and 2309327 (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	70.16	70.15	70.14	70.13	70.12	70.11	70.11
ϕ cal100	40.75	40.59	40.43	40.28	40.12	39.96	39.81

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.10	70.09	70.08	70.07	70.06	70.05	70.04
ϕ cal100	39.65	39.49	39.34	39.18	39.02	38.87	38.71

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.03	70.02	70.01	70.00	69.99	69.98	69.98
ϕ cal100	38.55	38.40	38.24	38.08	37.93	37.77	37.61

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--230250056 (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 = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-06-23

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3778
Date of sterilization	2023-06-12

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