

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

pH calibration parameters Lot No.2311327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	74.76	74.85	74.94	75.02	75.11	75.20	75.29
ϕ max	22.85	22.91	22.97	23.03	23.09	23.15	23.21
d <p>H</p>	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.13	5.13	5.12	5.12	5.11	5.11	5.11

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	75.37	75.46	75.55	75.64	75.72	75.81	75.90
ϕ max	23.27	23.33	23.39	23.45	23.51	23.57	23.63
d <p>H</p>	-0.41	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.10	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	75.99	76.07	76.16	76.25	76.34	76.42	76.51
ϕ max	23.69	23.75	23.81	23.87	23.93	23.99	24.05
d <p>H</p>	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.07	5.06	5.06	5.06	5.05	5.05	5.04

pH sensor properties

Dynamic range	pH 3.55 - 6.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90-4.10; ± 0.1 pH at pH 4.10-5.90; ± 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 pH51-230250063 (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 (Round Well) Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2023-07-20

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.2311327 (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	70.49	70.48	70.46	70.45	70.44	70.43	70.41
φ cal100	40.93	40.76	40.59	40.42	40.25	40.08	39.91

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.40	70.39	70.38	70.36	70.35	70.34	70.33
φ cal100	39.74	39.57	39.40	39.23	39.06	38.89	38.72

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.32	70.30	70.29	70.28	70.27	70.25	70.24
φ cal100	38.55	38.38	38.21	38.04	37.87	37.70	37.53

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-232051035+36 (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 (Round Well) Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-07-20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4031
Date of sterilization	2023-07-13

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