

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

pH calibration parameters Lot No.2301101 (BioLector I Microbioreactor, filter module ID-102/-302)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	56.32	56.24	56.17	56.09	56.02	55.94	55.87
ϕ max	13.43	13.45	13.46	13.47	13.49	13.50	13.51
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.49	6.48	6.48	6.47	6.47	6.46	6.46

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	55.80	55.72	55.65	55.57	55.50	55.42	55.35
ϕ max	13.52	13.54	13.55	13.56	13.58	13.59	13.60
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.45	6.45	6.44	6.44	6.43	6.43	6.42

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	55.28	55.20	55.13	55.05	54.98	54.90	54.83
ϕ max	13.62	13.63	13.64	13.65	13.67	13.68	13.69
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.41	6.41	6.40	6.40	6.39	6.39	6.38

pH sensor properties

Dynamic range	pH 4.55 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10-5.40; ± 0.1 pH at pH 5.40-7.15; ± 0.25 pH at pH 7.15-7.45 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 HP8-2148-01 (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 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	2023-02-15

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.2301101 (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	72.31	72.32	72.34	72.35	72.36	72.38	72.39
φ cal100	42.45	42.25	42.06	41.86	41.67	41.47	41.28

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.40	72.42	72.43	72.44	72.46	72.47	72.48
φ cal100	41.08	40.89	40.69	40.50	40.30	40.11	39.91

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.50	72.51	72.53	72.54	72.55	72.57	72.58
φ cal100	39.72	39.52	39.33	39.13	38.94	38.74	38.55

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % 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 PSt3-HG-1921-01_5 (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 = 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	2023-02-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2023-01-26

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