

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

pH calibration parameters Lot No.2308101 (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	55.57	55.51	55.44	55.38	55.32	55.25	55.19
φ max	12.56	12.56	12.57	12.57	12.57	12.57	12.57
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.66	6.65	6.64	6.63	6.62	6.61	6.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	55.13	55.06	55.00	54.94	54.87	54.81	54.75
φ max	12.57	12.57	12.57	12.58	12.58	12.58	12.58
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.59	6.58	6.57	6.56	6.55	6.54	6.53

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	54.69	54.62	54.56	54.50	54.43	54.37	54.31
φ max	12.58	12.58	12.58	12.58	12.58	12.59	12.59
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.52	6.51	6.50	6.49	6.48	6.47	6.46

pH sensor properties

Dynamic range	pH 4.80 - 8.05
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.30-5.60; ± 0.1 pH at pH 5.60-7.20; ± 0.25 pH at pH 7.20-7.55 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_2 (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	2023-05-11

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.2308101 (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	73.16	73.11	73.06	73.01	72.96	72.91	72.85
φ cal100	42.56	42.33	42.11	41.88	41.66	41.43	41.21

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.80	72.75	72.70	72.65	72.60	72.55	72.49
φ cal100	40.98	40.76	40.53	40.30	40.08	39.85	39.63

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.44	72.39	72.34	72.29	72.24	72.18	72.13
φ cal100	39.40	39.18	38.95	38.73	38.50	38.28	38.05

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	2023-05-11

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2023-04-26

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