

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

pH calibration parameters Lot No.2402101 (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	54.49	54.43	54.36	54.29	54.22	54.15	54.08
ϕ max	11.03	11.04	11.05	11.05	11.06	11.07	11.07
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.42	6.42	6.41	6.41	6.40	6.40	6.39

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	54.01	53.94	53.87	53.80	53.73	53.67	53.60
ϕ max	11.08	11.09	11.10	11.10	11.11	11.12	11.12
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.39	6.38	6.38	6.37	6.37	6.36	6.36

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	53.53	53.46	53.39	53.32	53.25	53.18	53.11
ϕ max	11.13	11.14	11.15	11.15	11.16	11.17	11.17
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.35	6.35	6.34	6.34	6.33	6.33	6.32

pH sensor properties

Dynamic range	pH 4.60 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.05-5.35; ± 0.1 pH at pH 5.35-7.05; ± 0.25 pH at pH 7.05-7.35 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 HP8-2211-01 (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	2024-03-22

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.2402101 (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	72.84	72.81	72.77	72.74	72.71	72.68	72.64
φ cal100	42.64	42.42	42.21	41.99	41.78	41.56	41.35

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.61	72.58	72.54	72.51	72.48	72.45	72.41
φ cal100	41.14	40.92	40.71	40.49	40.28	40.06	39.85

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.38	72.35	72.32	72.28	72.25	72.22	72.19
φ cal100	39.63	39.42	39.20	38.99	38.77	38.56	38.35

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	2024-03-22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2024-03-08

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