

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

pH calibration parameters Lot No.2401101 (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	54.60	54.53	54.47	54.40	54.34	54.28	54.21
ϕ max	10.93	10.94	10.95	10.96	10.97	10.98	10.99
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.43	6.42	6.42	6.41	6.41	6.40	6.40

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	54.15	54.09	54.02	53.96	53.89	53.83	53.77
ϕ max	10.99	11.00	11.01	11.02	11.03	11.04	11.04
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.39	6.39	6.38	6.38	6.37	6.37	6.36

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	53.70	53.64	53.57	53.51	53.45	53.38	53.32
ϕ max	11.05	11.06	11.07	11.08	11.09	11.10	11.10
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.36	6.35	6.34	6.34	6.33	6.33	6.32

pH sensor properties

Dynamic range	pH 4.55 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.05-5.35; ± 0.1 pH at pH 5.35-7.10; ± 0.25 pH at pH 7.10-7.40 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	2024-03-03

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.2401101 (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	72.14	72.13	72.11	72.10	72.08	72.07	72.05
φ cal100	43.27	43.11	42.95	42.79	42.63	42.46	42.30

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.04	72.02	72.01	72.00	71.98	71.97	71.95
φ cal100	42.14	41.98	41.82	41.66	41.50	41.33	41.17

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.94	71.92	71.91	71.89	71.88	71.86	71.85
φ cal100	41.01	40.85	40.69	40.53	40.36	40.20	40.04

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	2024-03-03

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2024-02-02

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