

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

pH calibration parameters Lot No.2202102 (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	56.79	56.73	56.66	56.60	56.54	56.48	56.41
ϕ max	10.40	10.41	10.42	10.43	10.44	10.44	10.45
d ϕ H	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.20	6.19	6.18	6.17	6.16	6.16	6.15

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	56.35	56.29	56.22	56.16	56.10	56.04	55.97
ϕ max	10.46	10.47	10.47	10.48	10.49	10.50	10.50
d ϕ H	0.58	0.58	0.58	0.58	0.58	0.58	0.57
pH ₀	6.14	6.13	6.12	6.11	6.11	6.10	6.09

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	55.91	55.85	55.78	55.72	55.66	55.60	55.53
ϕ max	10.51	10.52	10.53	10.53	10.54	10.55	10.56
d ϕ H	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.08	6.07	6.07	6.06	6.05	6.04	6.03

pH sensor properties

Dynamic range	pH 4.15 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.70-5.05; ± 0.1 pH at pH 5.05-6.90; ± 0.25 pH at pH 6.90-7.25 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 HP8-1811-01_6 (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	2022-03-02

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.2202102 (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	72.30	72.29	72.28	72.27	72.26	72.25	72.24
φ cal100	42.50	42.26	42.03	41.80	41.56	41.33	41.10

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.23	72.22	72.21	72.20	72.19	72.18	72.17
φ cal100	40.86	40.63	40.40	40.16	39.93	39.70	39.46

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.16	72.15	72.13	72.12	72.11	72.10	72.09
φ cal100	39.23	39.00	38.76	38.53	38.29	38.06	37.83

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_4 (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	2022-03-02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1001695
Date of sterilization	2022-02-16

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