

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

pH calibration parameters Lot No.2210101 (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	55.84	55.77	55.71	55.65	55.58	55.52	55.45
φ max	12.87	12.88	12.89	12.90	12.91	12.92	12.93
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.64	6.63	6.62	6.61	6.60	6.59	6.58

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	55.39	55.32	55.26	55.19	55.13	55.06	55.00
φ max	12.94	12.95	12.96	12.97	12.98	12.99	13.00
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.58	6.57	6.56	6.55	6.54	6.53	6.52

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	54.93	54.87	54.81	54.74	54.68	54.61	54.55
φ max	13.01	13.02	13.03	13.04	13.05	13.06	13.07
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.51	6.50	6.50	6.49	6.48	6.47	6.46

pH sensor properties

Dynamic range	pH 4.70 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20-5.55; ± 0.1 pH at pH 5.55-7.20; ± 0.25 pH at pH 7.20-7.50 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	2022-09-06

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.2210101 (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	72.33	72.30	72.28	72.26	72.23	72.21	72.19
φ cal100	42.34	42.17	41.99	41.82	41.64	41.47	41.29

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.16	72.14	72.12	72.09	72.07	72.05	72.02
φ cal100	41.12	40.94	40.77	40.59	40.42	40.24	40.07

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.00	71.98	71.95	71.93	71.90	71.88	71.86
φ cal100	39.89	39.72	39.54	39.37	39.19	39.02	38.84

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	2022-09-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

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