

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

pH calibration parameters Lot No.2116101+2116107 (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	56.75	56.69	56.63	56.57	56.51	56.45	56.39
ϕ max	10.57	10.57	10.58	10.58	10.58	10.58	10.58
dpH	0.59	0.59	0.59	0.59	0.59	0.59	0.59
pH ₀	6.17	6.16	6.15	6.14	6.13	6.13	6.12

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	56.33	56.27	56.21	56.15	56.10	56.04	55.98
ϕ max	10.59	10.59	10.59	10.59	10.60	10.60	10.60
dpH	0.59	0.59	0.59	0.58	0.58	0.58	0.58
pH ₀	6.11	6.10	6.09	6.08	6.07	6.06	6.05

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	55.92	55.86	55.80	55.74	55.68	55.62	55.56
ϕ max	10.60	10.60	10.61	10.61	10.61	10.61	10.62
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.04	6.04	6.03	6.02	6.01	6.00	5.99

pH sensor properties

Dynamic range	pH 4.10 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65-5.00; ± 0.1 pH at pH 5.00-6.85; ± 0.25 pH at pH 6.85-7.20 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 HP8-1811-01_5 (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	2021-12-07

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.2116101+2116107 (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	72.99	72.95	72.91	72.86	72.82	72.78	72.73
ϕ cal100	41.96	41.75	41.54	41.33	41.12	40.91	40.70

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.69	72.65	72.60	72.56	72.52	72.47	72.43
ϕ cal100	40.49	40.28	40.08	39.87	39.66	39.45	39.24

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.39	72.34	72.30	72.25	72.21	72.17	72.12
ϕ cal100	39.03	38.82	38.61	38.40	38.19	37.98	37.78

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_3 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	0.5 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	2021-12-07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	92085
Date of sterilization	2021-11-25

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