

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

pH calibration parameters Lot No.2202101 (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	56.97	56.89	56.81	56.73	56.65	56.57	56.48
φ max	11.62	11.62	11.62	11.61	11.61	11.61	11.61
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.20	6.20	6.19	6.19	6.18	6.18	6.17

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	56.40	56.32	56.24	56.16	56.08	55.99	55.91
φ max	11.61	11.60	11.60	11.60	11.60	11.60	11.59
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.16	6.16	6.15	6.15	6.14	6.14	6.13

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	55.83	55.75	55.67	55.59	55.50	55.42	55.34
φ max	11.59	11.59	11.59	11.59	11.58	11.58	11.58
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.12	6.12	6.11	6.11	6.10	6.10	6.09

pH sensor properties

Dynamic range	pH 4.25 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75-5.10; ± 0.1 pH at pH 5.10-6.90; ± 0.25 pH at pH 6.90-7.25 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_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	2022-02-25

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

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

DO calibration parameters Lot No.2202101 (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	72.78	72.73	72.69	72.64	72.60	72.55	72.51
ϕ cal100	42.13	41.93	41.73	41.53	41.33	41.13	40.93

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.46	72.42	72.37	72.33	72.28	72.24	72.20
ϕ cal100	40.72	40.52	40.32	40.12	39.92	39.72	39.52

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.15	72.11	72.06	72.02	71.97	71.93	71.88
ϕ cal100	39.32	39.12	38.92	38.72	38.51	38.31	38.11

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_2 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Two-point calibration at an oxygen-free environment (1.0 M sulfite system) and an air-saturated environment (21% oxygen with QC buffer)
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	2022-02-25

Sterilization procedure

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

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