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

pH calibration parameters Lot No.2117101 and 2117107 (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	57.18	57.09	57.01	56.93	56.85	56.77	56.68
ϕ max	11.61	11.60	11.60	11.59	11.58	11.57	11.56
dpH	0.56	0.57	0.57	0.57	0.57	0.57	0.57
pH_0	6.12	6.11	6.11	6.10	6.09	6.09	6.08

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	56.60	56.52	56.44	56.36	56.27	56.19	56.11
ϕ max	11.56	11.55	11.54	11.53	11.53	11.52	11.51
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH_0	6.08	6.07	6.07	6.06	6.06	6.05	6.05

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	56.03	55.95	55.86	55.78	55.70	55.62	55.53
ϕ max	11.50	11.50	11.49	11.48	11.47	11.46	11.46
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH_0	6.04	6.03	6.03	6.02	6.02	6.01	6.01

pH sensor properties

Dynamic range	pH 4.15 - 7.70
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 6.85-7.15 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 / Round Well Plate (MTP-(R)48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	pH 255.90 (pH Ser. 3403, gain 55)
Date of calibration	2021-12-21

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 BioLection software!

DO calibration parameters Lot No.2117101 and 2117107 (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	72.68	72.63	72.58	72.53	72.48
ϕ cal100	40.83	40.63	40.43	40.24	40.04	39.84	39.64

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.44	72.39	72.34	72.29	72.24	72.19	72.14
ϕ cal100	39.45	39.25	39.05	38.86	38.66	38.46	38.26

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.09	72.05	72.00	71.95	71.90	71.85	71.80
ϕ cal100	38.07	37.87	37.67	37.48	37.28	37.08	36.88

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.5 % O2 (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O2 per day (sampling interval of 6 min)
Response time (t90)	< 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	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 / Round Well Plate (MTP-(R)48-BOH1)
Calibration device	Hardware ID: BL092-CX-4A7394
Calibration phase offset	DO 332.50 (DO Ser. 3402, gain 70)
Date of calibration	2021-12-21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	979401
Date of sterilization	2021-12-14

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