

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

pH calibration parameters Lot No.2210201 (BioLector II/Pro Microbioreactor, filter module ID-221/421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.85	71.77	71.69	71.61	71.53	71.45	71.37
φ max	23.56	23.49	23.43	23.37	23.31	23.25	23.18
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.03	6.02	6.01	6.00	5.98	5.97	5.96

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.29	71.21	71.13	71.06	70.98	70.90	70.82
φ max	23.12	23.06	23.00	22.93	22.87	22.81	22.75
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.95	5.94	5.93	5.92	5.91	5.89	5.88

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.74	70.66	70.58	70.50	70.42	70.34	70.26
φ max	22.68	22.62	22.56	22.50	22.43	22.37	22.31
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.87	5.86	5.85	5.84	5.83	5.81	5.80

pH sensor properties

Dynamic range	pH 3.95 - 8.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.65 - 5.10 ; ± 0.1 pH at pH 5.10 - 7.45 ; ± 0.25 pH at pH 7.45 - 7.90 (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 LG1-2141-01 (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 2.00 ± 0.02 / pH 3.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-09-01

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.2210201 (BioLector II/Pro Microbioreactor, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.13	70.12	70.10	70.09	70.07	70.05	70.04
φ cal100	41.43	41.23	41.02	40.82	40.61	40.40	40.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.02	70.00	69.99	69.97	69.96	69.94	69.92
φ cal100	39.99	39.79	39.58	39.37	39.17	38.96	38.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.91	69.89	69.88	69.86	69.84	69.83	69.81
φ cal100	38.55	38.34	38.14	37.93	37.73	37.52	37.31

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % 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 RF-221155397 (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_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-09-01

Sterilization procedure

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

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