

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

pH calibration parameters Lot No.2212202 (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	69.71	69.62	69.54	69.46	69.37	69.29	69.21
φ max	21.92	21.85	21.77	21.70	21.62	21.55	21.47
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.92	5.90	5.89	5.88	5.86	5.85	5.84

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.12	69.04	68.95	68.87	68.79	68.70	68.62
φ max	21.40	21.32	21.25	21.17	21.10	21.02	20.95
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.83	5.81	5.80	5.79	5.77	5.76	5.75

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.53	68.45	68.37	68.28	68.20	68.12	68.03
φ max	20.88	20.80	20.73	20.65	20.58	20.50	20.43
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.73	5.72	5.71	5.69	5.68	5.67	5.65

pH sensor properties

Dynamic range	pH 3.55 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.55 ; ± 0.25 pH at pH 6.55 - 7.05 (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 LG1-2212-01 (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	2022-09-26

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.2212202 (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	70.82	70.80	70.78	70.76	70.74	70.72	70.70
φ cal100	42.01	41.79	41.58	41.36	41.14	40.93	40.71

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.68	70.66	70.64	70.62	70.60	70.58	70.56
φ cal100	40.50	40.28	40.07	39.85	39.63	39.42	39.20

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.54	70.52	70.50	70.48	70.47	70.45	70.43
φ cal100	38.99	38.77	38.56	38.34	38.12	37.91	37.69

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-221155398 (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	2022-09-26

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-07

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