

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

pH calibration parameters Lot No.2216201 (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	69.18	69.09	69.00	68.91	68.82	68.73	68.64
ϕ max	22.03	21.94	21.86	21.77	21.68	21.60	21.51
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.91	5.90	5.88	5.87	5.86	5.84	5.83

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.56	68.47	68.38	68.29	68.20	68.11	68.03
ϕ max	21.43	21.34	21.26	21.17	21.08	21.00	20.91
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.82	5.80	5.79	5.78	5.76	5.75	5.74

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	67.94	67.85	67.76	67.67	67.58	67.49	67.41
ϕ max	20.83	20.74	20.66	20.57	20.48	20.40	20.31
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.72	5.71	5.70	5.68	5.67	5.66	5.64

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 (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 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	2023-01-09

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.2216201 (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	68.75	68.72	68.69	68.66	68.63	68.60	68.56
φ cal100	43.58	43.34	43.09	42.84	42.59	42.34	42.10

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	68.53	68.50	68.47	68.44	68.41	68.38	68.35
φ cal100	41.85	41.60	41.35	41.10	40.86	40.61	40.36

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	68.32	68.29	68.26	68.23	68.19	68.16	68.13
φ cal100	40.11	39.86	39.62	39.37	39.12	38.87	38.62

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-224858175 (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	2023-01-09

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2022-12-23

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