

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

pH calibration parameters Lot No.2117201 and 2117207 (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	72.13	72.05	71.97	71.89	71.80	71.72	71.64
φ max	22.73	22.67	22.62	22.56	22.51	22.45	22.40
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.97	5.96	5.95	5.93	5.92	5.91	5.90

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.56	71.47	71.39	71.31	71.23	71.14	71.06
φ max	22.34	22.29	22.23	22.18	22.12	22.07	22.02
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.88	5.87	5.86	5.85	5.83	5.82	5.81

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.98	70.90	70.81	70.73	70.65	70.56	70.48
φ max	21.96	21.91	21.85	21.80	21.74	21.69	21.63
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.80	5.79	5.77	5.76	5.75	5.74	5.72

pH sensor properties

Dynamic range	pH 3.55 - 7.90
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.70 ; ± 0.25 pH at pH 6.70 - 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 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 ± 0.01 / pH 3.00 ± 0.015 / pH 9.00 ± 0.01 / 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 -360.69 (pH Ser. 3513, gain 8)
Date of calibration	2022-01-06

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.2117201 and 2117207 (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	70.23	70.21	70.19	70.16	70.14	70.11	70.09
φ cal100	41.60	41.38	41.15	40.93	40.71	40.49	40.27

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.07	70.04	70.02	69.99	69.97	69.94	69.92
φ cal100	40.05	39.82	39.60	39.38	39.16	38.94	38.71

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.90	69.87	69.85	69.82	69.80	69.78	69.75
φ cal100	38.49	38.27	38.05	37.83	37.61	37.38	37.16

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-213550640+641 (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_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 -360.83 (DO Ser. 4452, gain 4)
Date of calibration	2022-01-06

Sterilization procedure

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

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