

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

pH calibration parameters Lot No.2201201 and 2201207 (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	72.04	71.96	71.87	71.79	71.71	71.62
φ max	22.74	22.70	22.65	22.61	22.57	22.52	22.48
dpH	0.70	0.70	0.70	0.69	0.69	0.69	0.69
pH ₀	5.91	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	71.54	71.45	71.37	71.28	71.20	71.11	71.03
φ max	22.44	22.39	22.35	22.31	22.26	22.22	22.18
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.83	5.82	5.80	5.79	5.78	5.77	5.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.94	70.86	70.77	70.69	70.60	70.52	70.43
φ max	22.13	22.09	22.05	22.00	21.96	21.92	21.87
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.74	5.73	5.72	5.71	5.70	5.69	5.67

pH sensor properties

Dynamic range	pH 3.50 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20 - 4.65 ; ± 0.1 pH at pH 4.65 - 6.60 ; ± 0.25 pH at pH 6.60 - 7.10 (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 ± 0.02 / 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 -360.68 (pH Ser. 3513, gain 8)
Date of calibration	2022-01-31

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.2201201 and 2201207 (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	70.31	70.29	70.26	70.24	70.21	70.19	70.16
φ cal100	41.27	41.05	40.84	40.63	40.41	40.20	39.99

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.14	70.11	70.09	70.06	70.04	70.01	69.99
φ cal100	39.77	39.56	39.35	39.13	38.92	38.71	38.49

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.96	69.94	69.91	69.89	69.86	69.84	69.81
φ cal100	38.28	38.07	37.85	37.64	37.43	37.21	37.00

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-213550642 (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	2022-01-31

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	990461
Date of sterilization	2022-01-19

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