

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

pH calibration parameters Lot No.2201221 (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	67.81	67.73	67.65	67.57	67.49	67.41	67.33
ϕ max	12.94	12.86	12.77	12.69	12.61	12.52	12.44
dpH	0.77	0.78	0.78	0.78	0.78	0.78	0.78
pH ₀	6.52	6.51	6.50	6.49	6.48	6.47	6.47

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.25	67.17	67.10	67.02	66.94	66.86	66.78
ϕ max	12.36	12.27	12.19	12.11	12.02	11.94	11.86
dpH	0.79	0.79	0.79	0.79	0.79	0.79	0.80
pH ₀	6.46	6.45	6.44	6.43	6.42	6.41	6.40

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.70	66.62	66.54	66.46	66.38	66.30	66.22
ϕ max	11.77	11.69	11.61	11.53	11.44	11.36	11.28
dpH	0.80	0.80	0.80	0.80	0.80	0.80	0.81
pH ₀	6.39	6.38	6.38	6.37	6.36	6.35	6.34

pH sensor properties

Dynamic range	pH 3.85 - 8.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.60 - 5.10; ± 0.1 pH at pH 5.10 - 7.45; ± 0.25 pH at pH 7.45 - 7.95 (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 LG1-1939-01_2 (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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.68 (pH Ser. 3513, gain 8)
Date of calibration	2022-02-02

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.2201221 (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	70.37	70.34	70.32	70.29	70.26	70.24	70.21
ϕ cal100	41.09	40.89	40.68	40.48	40.27	40.07	39.86

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.18	70.16	70.13	70.10	70.08	70.05	70.03
ϕ cal100	39.65	39.45	39.24	39.04	38.83	38.63	38.42

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.00	69.97	69.95	69.92	69.89	69.87	69.84
ϕ cal100	38.22	38.01	37.80	37.60	37.39	37.19	36.98

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-213550641 (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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.83 (DO Ser. 4452, gain 4)
Date of calibration	2022-02-02

Sterilization procedure

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

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