

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

pH calibration parameters Lot No.2309221 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.24	71.15	71.06	70.97	70.88	70.79	70.70
φ max	28.97	28.87	28.78	28.68	28.59	28.49	28.40
dpH	0.66	0.66	0.66	0.66	0.66	0.66	0.66
pH ₀	5.84	5.83	5.83	5.82	5.81	5.81	5.80

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.62	70.53	70.44	70.35	70.26	70.17	70.08
φ max	28.30	28.21	28.11	28.02	27.92	27.82	27.73
dpH	0.66	0.66	0.66	0.67	0.67	0.67	0.67
pH ₀	5.80	5.79	5.78	5.78	5.77	5.77	5.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.99	69.91	69.82	69.73	69.64	69.55	69.46
φ max	27.63	27.54	27.44	27.35	27.25	27.16	27.06
dpH	0.67	0.67	0.67	0.67	0.67	0.67	0.67
pH ₀	5.76	5.75	5.74	5.74	5.73	5.73	5.72

pH sensor properties

Dynamic range	pH 3.65 - 7.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30-4.75; ± 0.1 pH at pH 4.75-6.45; ± 0.25 pH at pH 6.45-6.90 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 LG1-2239-02 (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 = LG1-RF-calibration, 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: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2023-06-22

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.2309221 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.35	70.33	70.32	70.30	70.28	70.26	70.24
φ cal100	41.11	40.97	40.83	40.68	40.54	40.40	40.25

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.23	70.21	70.19	70.17	70.15	70.14	70.12
φ cal100	40.11	39.96	39.82	39.68	39.53	39.39	39.24

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.10	70.08	70.06	70.05	70.03	70.01	69.99
φ cal100	39.10	38.96	38.81	38.67	38.53	38.38	38.24

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- 230250056 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	1.0 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = LG1-RF-calibration, 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: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-06-22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3778
Date of sterilization	2023-06-12

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