

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

pH calibration parameters Lot No.2315221 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.51	70.41	70.31	70.21	70.11	70.01	69.91
φ max	24.21	24.11	24.01	23.91	23.81	23.71	23.61
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.82	5.82	5.81	5.80	5.79	5.78	5.77

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.80	69.70	69.60	69.50	69.40	69.30	69.20
φ max	23.51	23.41	23.31	23.21	23.11	23.01	22.91
dpH	0.70	0.70	0.71	0.71	0.71	0.71	0.71
pH ₀	5.77	5.76	5.75	5.74	5.73	5.72	5.72

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.09	68.99	68.89	68.79	68.69	68.59	68.49
φ max	22.81	22.71	22.61	22.51	22.41	22.32	22.22
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.71	5.70	5.69	5.68	5.67	5.67	5.66

pH sensor properties

Dynamic range	pH 3.40 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15-4.65; ± 0.1 pH at pH 4.65-6.55; ± 0.25 pH at pH 6.55-7.10 batch calibration
Response time (t ₉₀)	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 LG1-2239-01 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2023-10-30

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.2315221 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.19	70.18	70.16	70.14	70.13	70.11	70.09
ϕ cal100	41.46	41.28	41.10	40.92	40.74	40.56	40.38

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.08	70.06	70.04	70.02	70.01	69.99	69.97
ϕ cal100	40.20	40.01	39.83	39.65	39.47	39.29	39.11

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.96	69.94	69.92	69.90	69.89	69.87	69.85
ϕ cal100	38.93	38.75	38.57	38.39	38.20	38.02	37.84

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-232551418 (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-MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-10-30

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4339
Date of sterilization	2023-10-16

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