

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

pH calibration parameters Lot No.2403201, 2403207 and 2403291 (BioLector® II/Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.32	70.23	70.14	70.05	69.97	69.88	69.79
φ max	27.23	27.14	27.05	26.96	26.87	26.78	26.68
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	6.00	5.99	5.98	5.98	5.97	5.96	5.96

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.70	69.61	69.52	69.44	69.35	69.26	69.17
φ max	26.59	26.50	26.41	26.32	26.23	26.13	26.04
dpH	0.69	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.95	5.94	5.93	5.93	5.92	5.91	5.91

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.08	68.99	68.90	68.82	68.73	68.64	68.55
φ max	25.95	25.86	25.77	25.67	25.58	25.49	25.40
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.90	5.89	5.89	5.88	5.87	5.87	5.86

pH sensor properties

Dynamic range	pH 3.65 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40-4.90; ± 0.1 pH at pH 4.90-6.70; ± 0.25 pH at pH 6.70-7.20 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 ± 0.02 / 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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2024-04-26

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.2403201 and 2403207 (BioLector® II/Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.13	70.11	70.09	70.07	70.05	70.04	70.02
φ cal100	41.98	41.81	41.64	41.47	41.30	41.14	40.97

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.00	69.98	69.96	69.94	69.92	69.91	69.89
φ cal100	40.80	40.63	40.46	40.29	40.12	39.95	39.78

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.87	69.85	69.83	69.81	69.79	69.77	69.76
φ cal100	39.62	39.45	39.28	39.11	38.94	38.77	38.60

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-232551421-23 (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 = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2024-04-26

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5171
Date of sterilization	2024-04-08

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