

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

pH calibration parameters Lot No.2405201 (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	71.44	71.34	71.24	71.15	71.05	70.95	70.85
φ max	28.13	28.04	27.94	27.84	27.75	27.65	27.56
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.95	5.95	5.94	5.93	5.93	5.92	5.91

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.76	70.66	70.56	70.46	70.37	70.27	70.17
φ max	27.46	27.37	27.27	27.17	27.08	26.98	26.89
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.90	5.90	5.89	5.88	5.88	5.87	5.86

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	70.07	69.98	69.88	69.78	69.69	69.59	69.49
φ max	26.79	26.69	26.60	26.50	26.41	26.31	26.22
dpH	0.69	0.69	0.70	0.70	0.70	0.70	0.70
pH ₀	5.86	5.85	5.84	5.84	5.83	5.82	5.82

pH sensor properties

Dynamic range	pH 3.65 - 7.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.35-4.85; ± 0.1 pH at pH 4.85-6.60; ± 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 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	2024-05-14

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

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

DO calibration parameters Lot No.2405201 (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	69.80	69.78	69.76	69.73	69.71	69.69	69.66
φ cal100	41.17	41.00	40.83	40.66	40.49	40.32	40.15

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.64	69.62	69.59	69.57	69.55	69.52	69.50
φ cal100	39.99	39.82	39.65	39.48	39.31	39.14	38.97

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.48	69.45	69.43	69.41	69.38	69.36	69.34
φ cal100	38.80	38.63	38.46	38.29	38.12	37.95	37.78

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-232551425+26 (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	2024-05-14

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5285
Date of sterilization	2026-04-30

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