

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

pH calibration parameters Lot No.2404201 (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	70.81	70.71	70.62	70.52	70.43	70.33	70.24
φ max	27.44	27.34	27.25	27.16	27.07	26.97	26.88
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	6.02	6.01	6.00	5.99	5.99	5.98	5.97

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.14	70.05	69.95	69.86	69.76	69.67	69.57
φ max	26.79	26.70	26.60	26.51	26.42	26.33	26.23
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.97	5.96	5.95	5.95	5.94	5.93	5.92

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.48	69.38	69.29	69.19	69.10	69.00	68.91
φ max	26.14	26.05	25.95	25.86	25.77	25.68	25.58
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.92	5.91	5.90	5.90	5.89	5.88	5.88

pH sensor properties

Dynamic range	pH 3.65 - 7.95
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.35-4.90; ± 0.1 pH at pH 4.90-6.65; ± 0.25 pH at pH 6.65-7.20 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	2024-05-08

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.2404201 and 2404281 (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	69.94	69.92	69.89	69.87	69.85	69.82	69.80
φ cal100	41.05	40.88	40.71	40.54	40.37	40.20	40.03

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.78	69.76	69.73	69.71	69.69	69.67	69.64
φ cal100	39.86	39.69	39.52	39.35	39.18	39.01	38.84

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.62	69.60	69.57	69.55	69.53	69.51	69.48
φ cal100	38.66	38.49	38.32	38.15	37.98	37.81	37.64

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-232551424+25 (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	2024-05-08

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5227
Date of sterilization	2024-04-17

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