

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

pH calibration parameters Lot No.2308221 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.03	70.91	70.80	70.69	70.58	70.47	70.36
φ max	28.31	28.18	28.06	27.93	27.80	27.68	27.55
dpH	0.64	0.64	0.65	0.65	0.65	0.65	0.65
pH ₀	5.91	5.90	5.89	5.89	5.88	5.87	5.86

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	70.24	70.13	70.02	69.91	69.80	69.69	69.57
φ max	27.42	27.30	27.17	27.05	26.92	26.79	26.67
dpH	0.65	0.65	0.65	0.65	0.65	0.65	0.65
pH ₀	5.86	5.85	5.84	5.83	5.83	5.82	5.81

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	69.46	69.35	69.24	69.13	69.01	68.90	68.79
φ max	26.54	26.41	26.29	26.16	26.04	25.91	25.78
dpH	0.65	0.65	0.65	0.65	0.65	0.65	0.65
pH ₀	5.81	5.80	5.79	5.78	5.78	5.77	5.76

pH sensor properties

Dynamic range	pH 3.90 - 7.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.45-4.85; ± 0.1 pH at pH 4.85-6.50; ± 0.25 pH at pH 6.50-6.95 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 2239-02 (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 Round Well Plate (MTP-RMF32C-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2023-06-02

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.2308221 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	69.99	69.97	69.96	69.95	69.93	69.92	69.91
φ cal100	41.41	41.22	41.03	40.84	40.65	40.46	40.27

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	69.89	69.88	69.87	69.85	69.84	69.82	69.81
φ cal100	40.08	39.89	39.70	39.52	39.33	39.14	38.95

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.80	69.78	69.77	69.76	69.74	69.73	69.72
φ cal100	38.76	38.57	38.38	38.19	38.00	37.81	37.62

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-23025005 (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 Round Well Plate (MTP-RMF32C-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-06-02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3703
Date of sterilization	2023-04-26

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