

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

pH calibration parameters Lot No.2404221+227 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	70.41	70.30	70.20	70.09	69.99	69.88	69.78
φ max	25.81	25.70	25.59	25.48	25.37	25.26	25.15
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH ₀	5.93	5.92	5.91	5.91	5.90	5.89	5.88

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.67	69.57	69.46	69.36	69.25	69.15	69.04
φ max	25.04	24.93	24.82	24.71	24.61	24.50	24.39
dpH	0.68	0.68	0.68	0.68	0.68	0.68	0.68
pH ₀	5.88	5.87	5.86	5.85	5.84	5.84	5.83

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.94	68.83	68.73	68.62	68.52	68.41	68.31
φ max	24.28	24.17	24.06	23.95	23.84	23.73	23.62
dpH	0.68	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.82	5.81	5.81	5.80	5.79	5.78	5.77

pH sensor properties

Dynamic range	pH 3.65 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30-4.75; ± 0.1 pH at pH 4.75-6.60; ± 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 ± 0.01 / 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-MF32C-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

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

DO calibration parameters Lot No.2404221+227 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.44	70.42	70.40	70.38	70.36	70.34	70.32
ϕ cal100	41.48	41.30	41.12	40.94	40.76	40.58	40.39

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.30	70.28	70.26	70.24	70.22	70.19	70.17
ϕ cal100	40.21	40.03	39.85	39.67	39.49	39.31	39.13

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.15	70.13	70.11	70.09	70.07	70.05	70.03
ϕ cal100	38.95	38.77	38.58	38.40	38.22	38.04	37.86

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 (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-MF32C-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

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