

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

pH calibration parameters Lot No.2216221+2216227 (BioLector® Pro, filter module ID-221/-421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	68.65	68.57	68.48	68.39	68.30	68.22	68.13
φ max	24.27	24.19	24.10	24.02	23.93	23.85	23.76
dpH	0.78	0.78	0.78	0.78	0.78	0.78	0.78
pH ₀	6.09	6.08	6.07	6.05	6.04	6.03	6.02

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.04	67.95	67.86	67.78	67.69	67.60	67.51
φ max	23.68	23.60	23.51	23.43	23.34	23.26	23.17
dpH	0.78	0.78	0.78	0.78	0.78	0.78	0.78
pH ₀	6.00	5.99	5.98	5.96	5.95	5.94	5.93

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.43	67.34	67.25	67.16	67.08	66.99	66.90
φ max	23.09	23.00	22.92	22.83	22.75	22.67	22.58
dpH	0.77	0.77	0.77	0.77	0.77	0.77	0.77
pH ₀	5.91	5.90	5.89	5.87	5.86	5.85	5.83

pH sensor properties

Dynamic range	pH 3.60 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40-5.05; ± 0.1 pH at pH 5.05-6.65; ± 0.25 pH at pH 6.65-7.25 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 LG1-2212-01 (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 (Round Well) Plate (MTP-(R)MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.31 (pH Ser. 3305, gain 8)
Date of calibration	2023-02-22

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.2216221+2216227 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	69.01	68.98	68.96	68.94	68.91	68.89	68.87
φ cal100	43.86	43.64	43.42	43.20	42.98	42.76	42.54

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	68.84	68.82	68.80	68.77	68.75	68.73	68.70
φ cal100	42.32	42.10	41.88	41.66	41.44	41.23	41.01

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	68.68	68.66	68.63	68.61	68.59	68.56	68.54
φ cal100	40.79	40.57	40.35	40.13	39.91	39.69	39.47

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-224858175 (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 (Round Well) Plate (MTP-(R)MF32-BOH2)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-02-22

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2022-12-23

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