

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

pH calibration parameters Lot No.2214321 and 2214327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	69.49	69.59	69.70	69.81	69.91	70.02	70.12
ϕ max	14.11	14.15	14.18	14.22	14.25	14.29	14.32
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.44	5.44	5.43	5.42	5.42	5.41	5.40

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	70.23	70.34	70.44	70.55	70.65	70.76	70.87
ϕ max	14.36	14.39	14.43	14.47	14.50	14.54	14.57
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.38
pH ₀	5.40	5.39	5.38	5.38	5.37	5.36	5.36

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	70.97	71.08	71.18	71.29	71.40	71.50	71.61
ϕ max	14.61	14.64	14.68	14.71	14.75	14.79	14.82
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.35	5.34	5.34	5.33	5.32	5.32	5.31

pH sensor properties

Dynamic range	pH 3.95 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25-4.40; ± 0.1 pH at pH 4.40-6.10; ± 0.25 pH at pH 6.10-6.25 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 pH51-211650291 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2022-12-09

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.2214321 and 2214327 (BioLector Pro Microbioreactor, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.23	70.22	70.21	70.19	70.18	70.17	70.16
ϕ cal100	41.55	41.37	41.19	41.01	40.84	40.66	40.48

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.14	70.13	70.12	70.10	70.09	70.08	70.07
ϕ cal100	40.30	40.12	39.95	39.77	39.59	39.41	39.23

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.05	70.04	70.03	70.01	70.00	69.99	69.98
ϕ cal100	39.06	38.88	38.70	38.52	38.34	38.17	37.99

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-222756998 (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 = pH51-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2022-12-09

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3042
Date of sterilization	2022-11-14

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