

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

pH calibration parameters Lot No.2310301 and 2310307 (BioLector II/Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	77.49	77.52	77.55	77.57	77.60	77.63	77.65
ϕ max	24.97	25.02	25.06	25.11	25.15	25.20	25.24
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.02	5.01	5.01	5.00	5.00	5.00	4.99

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	77.68	77.71	77.73	77.76	77.79	77.81	77.84
ϕ max	25.29	25.33	25.38	25.42	25.47	25.51	25.56
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	4.99	4.98	4.98	4.97	4.97	4.97	4.96

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	77.87	77.89	77.92	77.95	77.97	78.00	78.03
ϕ max	25.60	25.64	25.69	25.73	25.78	25.82	25.87
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	4.96	4.95	4.95	4.95	4.94	4.94	4.93

pH sensor properties

Dynamic range	pH 3.40 - 6.25
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.75-3.90; ± 0.1 pH at pH 3.90-5.75; ± 0.25 pH at pH 5.75-5.95 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 pH51-230250064 (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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2023-06-20

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.2310301 and 2310307 (BioLector II/Pro Microbioreactor, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.57	70.55	70.54	70.52	70.50	70.49	70.47
ϕ cal100	41.22	41.05	40.87	40.70	40.52	40.34	40.17

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.45	70.44	70.42	70.40	70.39	70.37	70.36
ϕ cal100	39.99	39.81	39.64	39.46	39.29	39.11	38.93

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.34	70.32	70.31	70.29	70.27	70.26	70.24
ϕ cal100	38.76	38.58	38.41	38.23	38.05	37.88	37.70

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-230251035 (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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-06-20

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3778
Date of sterilization	2023-06-12

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