

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

pH calibration parameters Lot No.2311301 (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	75.29	75.36	75.42	75.49	75.56	75.62	75.69
ϕ max	25.49	25.55	25.60	25.66	25.72	25.78	25.83
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.11	5.10	5.09	5.09	5.08	5.08	5.07

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	75.75	75.82	75.89	75.95	76.02	76.09	76.15
ϕ max	25.89	25.95	26.00	26.06	26.12	26.18	26.23
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.07	5.06	5.05	5.05	5.04	5.04	5.03

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	76.22	76.29	76.35	76.42	76.49	76.55	76.62
ϕ max	26.29	26.35	26.40	26.46	26.52	26.57	26.63
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.03	5.02	5.01	5.01	5.00	5.00	4.99

pH sensor properties

Dynamic range	pH 3.55 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.85-4.05; ± 0.1 pH at pH 4.05-5.80; ± 0.25 pH at pH 5.80-6.00 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 pH51-230250063 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2023-07-19

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.2311301 (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	70.27	70.25	70.23	70.21	70.19	70.17	70.15
φ cal100	40.75	40.59	40.44	40.28	40.13	39.97	39.82

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.13	70.11	70.09	70.07	70.05	70.03	70.01
φ cal100	39.67	39.51	39.36	39.20	39.05	38.89	38.74

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.99	69.97	69.95	69.93	69.91	69.89	69.87
φ cal100	38.59	38.43	38.28	38.12	37.97	37.81	37.66

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-232051035 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-07-19

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4031
Date of sterilization	2023-07-13

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