

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

pH calibration parameters Lot No.2316311 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	75.07	75.14	75.21	75.27	75.34	75.41	75.47
ϕ max	21.92	21.97	22.01	22.06	22.11	22.16	22.21
dpH	-0.38	-0.38	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.29	5.28	5.28	5.27	5.26	5.26	5.25

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	75.54	75.60	75.67	75.74	75.80	75.87	75.94
ϕ max	22.25	22.30	22.35	22.40	22.45	22.49	22.54
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.25	5.24	5.23	5.23	5.22	5.21	5.21

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	76.00	76.07	76.14	76.20	76.27	76.34	76.40
ϕ max	22.59	22.64	22.69	22.73	22.78	22.83	22.88
dpH	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37	-0.37
pH ₀	5.20	5.20	5.19	5.18	5.18	5.17	5.17

pH sensor properties

Dynamic range	pH 3.85 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15-4.30; ± 0.1 pH at pH 4.30-5.90; ± 0.25 pH at pH 5.90-6.05 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 pH51-230250067 (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-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2023-11-15

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.2316311 (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	70.40	70.38	70.36	70.34	70.32	70.30	70.29
ϕ cal100	40.96	40.79	40.61	40.44	40.26	40.09	39.91

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.27	70.25	70.23	70.21	70.19	70.17	70.15
ϕ cal100	39.74	39.57	39.39	39.22	39.04	38.87	38.69

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.13	70.11	70.10	70.08	70.06	70.04	70.02
ϕ cal100	38.52	38.35	38.17	38.00	37.82	37.65	37.47

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-232551418 (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-MF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-11-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4534
Date of sterilization	2023-11-08

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