

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

pH calibration parameters Lot No.2308321+327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	72.79	72.90	73.00	73.10	73.21	73.31	73.41
ϕ max	19.01	19.06	19.10	19.15	19.20	19.25	19.29
dpH	-0.37	-0.37	-0.37	-0.38	-0.38	-0.38	-0.38
pH ₀	5.13	5.12	5.12	5.11	5.10	5.09	5.09

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	73.51	73.62	73.72	73.82	73.92	74.03	74.13
ϕ max	19.34	19.39	19.43	19.48	19.53	19.58	19.62
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.08	5.07	5.07	5.06	5.05	5.05	5.04

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	74.23	74.34	74.44	74.54	74.64	74.75	74.85
ϕ max	19.67	19.72	19.77	19.81	19.86	19.91	19.96
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.39	-0.39
pH ₀	5.03	5.02	5.02	5.01	5.00	5.00	4.99

pH sensor properties

Dynamic range	pH 3.65 - 6.30
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95-4.15; ± 0.1 pH at pH 4.15-5.80; ± 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 pH51-222757009+010 (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	2023-05-23

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.2308321+327 (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	69.89	69.88	69.87	69.85	69.84	69.82	69.81
ϕ cal100	41.14	40.95	40.77	40.58	40.39	40.20	40.01

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	69.79	69.78	69.77	69.75	69.74	69.72	69.71
ϕ cal100	39.82	39.63	39.44	39.25	39.06	38.88	38.69

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	69.69	69.68	69.67	69.65	69.64	69.62	69.61
ϕ cal100	38.50	38.31	38.12	37.93	37.74	37.55	37.36

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-230250056+57 (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	2023-05-23

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3703
Date of sterilization	2023-04-26

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