

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

pH calibration parameters Lot No.2208311 and 2208317 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	71.31	71.39	71.46	71.54	71.61	71.69	71.77
ϕ max	20.94	20.98	21.03	21.07	21.12	21.16	21.21
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.23	5.22	5.22	5.22	5.21	5.21	5.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	71.84	71.92	71.99	72.07	72.15	72.22	72.30
ϕ max	21.26	21.30	21.35	21.39	21.44	21.48	21.53
dpH	-0.39	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.20	5.19	5.19	5.18	5.18	5.17	5.17

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	72.37	72.45	72.53	72.60	72.68	72.76	72.83
ϕ max	21.58	21.62	21.67	21.71	21.76	21.80	21.85
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.16	5.16	5.16	5.15	5.15	5.14	5.14

pH sensor properties

Dynamic range	pH 3.65 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95-4.15; ± 0.1 pH at pH 4.15-5.90; ± 0.25 pH at pH 5.90-6.05 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 pH51-2142507703+704 (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	2022-08-12

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.2208311 and 2208317 (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	70.54	70.53	70.51	70.50	70.49	70.47	70.46
φ cal100	40.85	40.72	40.59	40.47	40.34	40.22	40.09

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.44	70.43	70.42	70.40	70.39	70.38	70.36
φ cal100	39.97	39.84	39.71	39.59	39.46	39.34	39.21

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.35	70.34	70.32	70.31	70.29	70.28	70.27
φ cal100	39.08	38.96	38.83	38.71	38.58	38.46	38.33

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-221155396 (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	2022-08-12

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1064096
Date of sterilization	2022-07-28

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