

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

pH calibration parameters Lot No.2213321 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	70.26	70.37	70.47	70.58	70.69	70.79	70.90
ϕ max	13.19	13.22	13.24	13.27	13.29	13.32	13.34
dpH	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.41	5.41	5.40	5.39	5.39	5.38	5.38

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	71.01	71.11	71.22	71.33	71.43	71.54	71.65
ϕ max	13.36	13.39	13.41	13.44	13.46	13.49	13.51
dpH	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.37	5.37	5.36	5.36	5.35	5.34	5.34

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	71.75	71.86	71.97	72.07	72.18	72.29	72.39
ϕ max	13.54	13.56	13.59	13.61	13.63	13.66	13.68
dpH	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.33	5.33	5.32	5.32	5.31	5.31	5.30

pH sensor properties

Dynamic range	pH 4.05 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30-4.45; ± 0.1 pH at pH 4.45-6.05; ± 0.25 pH at pH 6.05-6.20 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 pH51-211650289 (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	2022-10-06

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.2213321 (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	70.21	70.20	70.19	70.17	70.16	70.15	70.13
φ cal100	40.66	40.51	40.36	40.22	40.07	39.93	39.78

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.12	70.11	70.10	70.08	70.07	70.06	70.04
φ cal100	39.64	39.49	39.35	39.20	39.05	38.91	38.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.03	70.02	70.00	69.99	69.98	69.96	69.95
φ cal100	38.62	38.47	38.33	38.18	38.03	37.89	37.74

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-222756996 (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	2022-10-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1085201
Date of sterilization	2022-09-27

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