

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

pH calibration parameters Lot No.2206321 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	71.82	71.91	72.01	72.10	72.19	72.29	72.38
ϕ max	18.94	18.99	19.04	19.09	19.13	19.18	19.23
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.38
pH ₀	5.30	5.29	5.29	5.28	5.28	5.27	5.26

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	72.48	72.57	72.67	72.76	72.85	72.95	73.04
ϕ max	19.27	19.32	19.37	19.41	19.46	19.51	19.55
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.26	5.25	5.25	5.24	5.24	5.23	5.22

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	73.14	73.23	73.33	73.42	73.51	73.61	73.70
ϕ max	19.60	19.65	19.69	19.74	19.79	19.83	19.88
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.22	5.21	5.21	5.20	5.19	5.19	5.18

pH sensor properties

Dynamic range	pH 3.80 - 6.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.10-4.25; ± 0.1 pH at pH 4.25-5.95; ± 0.25 pH at pH 5.95-6.10 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 pH51-214250697 (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	2022-05-19

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.2206321 (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	70.55	70.55	70.54	70.53	70.52	70.52	70.51
ϕ cal100	40.87	40.72	40.58	40.44	40.30	40.16	40.02

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.50	70.50	70.49	70.48	70.48	70.47	70.46
ϕ cal100	39.88	39.74	39.59	39.45	39.31	39.17	39.03

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.46	70.45	70.44	70.44	70.43	70.42	70.42
ϕ cal100	38.89	38.75	38.60	38.46	38.32	38.18	38.04

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-221155393 (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	2022-05-19

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1035388
Date of sterilization	2022-05-10

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