

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

pH calibration parameters Lot No.2210321 and 2210327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	64.39	64.55	64.71	64.87	65.04	65.20	65.36
ϕ max	13.02	13.05	13.09	13.12	13.15	13.18	13.21
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.51	5.51	5.50	5.50	5.49	5.48	5.48

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	65.53	65.69	65.85	66.01	66.18	66.34	66.50
ϕ max	13.24	13.27	13.30	13.34	13.37	13.40	13.43
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.47	5.47	5.46	5.46	5.45	5.45	5.44

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	66.66	66.83	66.99	67.15	67.31	67.48	67.64
ϕ max	13.46	13.49	13.52	13.55	13.59	13.62	13.65
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.43	5.43	5.42	5.42	5.41	5.41	5.40

pH sensor properties

Dynamic range	pH 4.15 - 6.65
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.45-4.60; ± 0.1 pH at pH 4.60-6.15; ± 0.25 pH at pH 6.15-6.35 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 pH51-211650288 (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	2022-08-26

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.2210321 and 2210327 (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	70.60	70.59	70.57	70.56	70.54	70.53	70.51
ϕ cal100	41.08	40.93	40.77	40.62	40.46	40.30	40.15

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.50	70.48	70.47	70.45	70.44	70.42	70.41
ϕ cal100	39.99	39.84	39.68	39.53	39.37	39.21	39.06

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.39	70.38	70.36	70.35	70.33	70.32	70.30
ϕ cal100	38.90	38.75	38.59	38.44	38.28	38.12	37.97

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-221155398 (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	2022-08-26

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

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