

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

pH calibration parameters Lot No.2207321 and 2207327 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.20	67.34	67.48	67.62	67.76	67.90	68.04
ϕ max	15.09	15.13	15.17	15.21	15.25	15.29	15.33
d ϕ H	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.40	5.39	5.38	5.38	5.37	5.36	5.36

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	68.18	68.31	68.45	68.59	68.73	68.87	69.01
ϕ max	15.37	15.41	15.45	15.49	15.53	15.57	15.61
d ϕ H	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.35	5.35	5.34	5.33	5.33	5.32	5.32

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	69.15	69.29	69.43	69.57	69.71	69.85	69.99
ϕ max	15.65	15.69	15.73	15.77	15.81	15.85	15.89
d ϕ H	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.31	5.30	5.30	5.29	5.29	5.28	5.27

pH sensor properties

Dynamic range	pH 3.90 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20-4.40; ± 0.1 pH at pH 4.40-6.05; ± 0.25 pH at pH 6.05-6.25 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 pH51-21650284 (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	2022-07-01

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.2207321 and 2207327 (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	70.38	70.37	70.35	70.34	70.33	70.31	70.30
φ cal100	41.25	41.08	40.92	40.76	40.60	40.43	40.27

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.28	70.27	70.26	70.24	70.23	70.21	70.20
φ cal100	40.11	39.95	39.78	39.62	39.46	39.30	39.13

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.19	70.17	70.16	70.15	70.13	70.12	70.10
φ cal100	38.97	38.81	38.64	38.48	38.32	38.16	37.99

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-221155394 (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	2022-07-01

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1048503
Date of sterilization	2022-06-17

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