

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

pH calibration parameters Lot No.2212321 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	71.49	71.59	71.69	71.80	71.90	72.00	72.11
φ max	24.25	24.32	24.39	24.47	24.54	24.61	24.68
dpH	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
pH ₀	5.23	5.23	5.22	5.22	5.21	5.20	5.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	72.21	72.31	72.42	72.52	72.62	72.73	72.83
φ max	24.75	24.82	24.89	24.96	25.03	25.10	25.17
dpH	-0.36	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
pH ₀	5.19	5.19	5.18	5.18	5.17	5.17	5.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	72.93	73.04	73.14	73.24	73.34	73.45	73.55
φ max	25.24	25.31	25.38	25.45	25.52	25.60	25.67
dpH	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35
pH ₀	5.16	5.15	5.15	5.14	5.14	5.13	5.13

pH sensor properties

Dynamic range	pH 3.85 - 6.25
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.15-4.30; ± 0.1 pH at pH 4.30-5.80; ± 0.25 pH at pH 5.80-5.95 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 pH51-214250705 (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	2022-09-07

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.2212321 (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	70.17	70.15	70.14	70.12	70.11	70.09	70.07
φ cal100	40.60	40.44	40.28	40.11	39.95	39.78	39.62

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.06	70.04	70.02	70.01	69.99	69.98	69.96
φ cal100	39.46	39.29	39.13	38.96	38.80	38.64	38.47

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.94	69.93	69.91	69.90	69.88	69.86	69.85
φ cal100	38.31	38.14	37.98	37.82	37.65	37.49	37.32

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-222756995 (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	2022-09-07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-20

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