

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

pH calibration parameters Lot No.2205301 (BioLector II/Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	73.14	73.22	73.31	73.40	73.49	73.58	73.67
ϕ max	20.77	20.82	20.86	20.91	20.96	21.00	21.05
d ϕ H	-0.40	-0.40	-0.40	-0.40	-0.40	-0.39	-0.39
pH ₀	5.24	5.24	5.23	5.23	5.22	5.21	5.21

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	73.76	73.85	73.94	74.03	74.12	74.21	74.30
ϕ max	21.10	21.14	21.19	21.24	21.28	21.33	21.38
d ϕ H	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.20	5.20	5.19	5.18	5.18	5.17	5.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	74.39	74.48	74.57	74.66	74.75	74.84	74.92
ϕ max	21.43	21.47	21.52	21.57	21.61	21.66	21.71
d ϕ H	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.16	5.15	5.15	5.14	5.13	5.13	5.12

pH sensor properties

Dynamic range	pH 3.70 - 6.35
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05-4.20; ± 0.1 pH at pH 4.20-5.90; ± 0.25 pH at pH 5.90-6.05 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 pH51-214250699+700 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2022-05-05

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.2205301 (BioLector II/Pro Microbioreactor, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	70.44	70.42	70.40	70.38	70.36	70.34	70.32
ϕ cal100	40.91	40.75	40.59	40.44	40.28	40.12	39.97

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.31	70.29	70.27	70.25	70.23	70.21	70.19
ϕ cal100	39.81	39.66	39.50	39.34	39.19	39.03	38.87

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.17	70.15	70.14	70.12	70.10	70.08	70.06
ϕ cal100	38.72	38.56	38.41	38.25	38.09	37.94	37.78

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-213550644 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2022-05-05

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1029868
Date of sterilization	2022-04-26

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