

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

pH calibration parameters Lot No.2207307 (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	71.54	71.64	71.74	71.85	71.95	72.05	72.15
ϕ max	23.77	23.83	23.90	23.96	24.03	24.09	24.15
d ϕ H	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.14	5.13	5.13	5.12	5.11	5.11	5.10

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	72.26	72.36	72.46	72.56	72.67	72.77	72.87
ϕ max	24.22	24.28	24.35	24.41	24.47	24.54	24.60
d ϕ H	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.10	5.09	5.09	5.08	5.08	5.07	5.07

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	72.98	73.08	73.18	73.28	73.39	73.49	73.59
ϕ max	24.66	24.73	24.79	24.86	24.92	24.98	25.05
d ϕ H	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.06	5.06	5.05	5.04	5.04	5.03	5.03

pH sensor properties

Dynamic range	pH 3.50 - 6.30
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.85-4.05; ± 0.1 pH at pH 4.05-5.80; ± 0.25 pH at pH 5.80-6.00 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 pH51-214250701 (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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2022-07-08

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.2207307 (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	70.76	70.75	70.74	70.72	70.71	70.70	70.68
ϕ cal100	41.57	41.43	41.29	41.15	41.01	40.87	40.73

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	70.67	70.66	70.65	70.63	70.62	70.61	70.60
ϕ cal100	40.59	40.45	40.31	40.17	40.03	39.89	39.75

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	70.58	70.57	70.56	70.54	70.53	70.52	70.51
ϕ cal100	39.61	39.47	39.33	39.20	39.06	38.92	38.78

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-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 = Round Well Plate (MTP-R48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2022-07-08

Sterilization procedure

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

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