

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

pH calibration parameters Lot No.2216301+2216307 (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	76.35	76.42	76.49	76.55	76.62	76.68	76.75
ϕ max	19.94	19.99	20.04	20.09	20.14	20.19	20.24
d <p>H</p>	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.24	5.23	5.23	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	76.82	76.88	76.95	77.02	77.08	77.15	77.22
ϕ max	20.28	20.33	20.38	20.43	20.48	20.53	20.58
d <p>H</p>	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.19	5.18	5.18	5.17	5.16	5.15	5.15

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	77.28	77.35	77.41	77.48	77.55	77.61	77.68
ϕ max	20.63	20.68	20.73	20.78	20.83	20.88	20.93
d <p>H</p>	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.14	5.13	5.13	5.12	5.11	5.10	5.10

pH sensor properties

Dynamic range	pH 3.70 - 6.50
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00-4.20; ± 0.1 pH at pH 4.20-5.95; ± 0.25 pH at pH 5.95-6.15 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 pH51-221155387-389 (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 -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2023-01-13

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

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

DO calibration parameters Lot No.2216301+2216307 (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	68.40	68.38	68.36	68.34	68.32	68.30	68.28
ϕ cal100	42.52	42.34	42.16	41.98	41.80	41.62	41.44

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	68.26	68.24	68.22	68.21	68.19	68.17	68.15
ϕ cal100	41.26	41.08	40.90	40.73	40.55	40.37	40.19

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.13	68.11	68.09	68.07	68.05	68.03	68.01
ϕ cal100	40.01	39.83	39.65	39.47	39.29	39.12	38.94

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-224858176 (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 -360.39 (DO Ser. 4302-RD, gain 4)
Date of calibration	2023-01-13

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2022-12-23

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