

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

pH calibration parameters Lot No.2216322 (BioLector Pro Microbioreactor, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	76.13	76.20	76.26	76.33	76.39	76.46	76.52
ϕ max	19.95	20.01	20.07	20.13	20.19	20.25	20.31
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.28	5.28	5.27	5.26	5.25	5.25	5.24

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	76.59	76.65	76.72	76.78	76.85	76.91	76.98
ϕ max	20.36	20.42	20.48	20.54	20.60	20.66	20.72
dpH	-0.39	-0.39	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.23	5.22	5.22	5.21	5.20	5.20	5.19

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	77.04	77.11	77.17	77.23	77.30	77.36	77.43
ϕ max	20.77	20.83	20.89	20.95	21.01	21.07	21.12
dpH	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.18	5.17	5.17	5.16	5.15	5.15	5.14

pH sensor properties

Dynamic range	pH 3.75 - 6.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05-4.25; ± 0.1 pH at pH 4.25-5.95; ± 0.25 pH at pH 5.95-6.10 batch calibration
Response time (t90)	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 pH51-221155385+386 (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 -360.09 (pH Ser. 3288, gain 6)
Date of calibration	2023-01-12

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.2216322 (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	69.13	69.12	69.10	69.08	69.06	69.04	69.02
ϕ cal100	42.75	42.56	42.36	42.17	41.98	41.78	41.59

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	69.01	68.99	68.97	68.95	68.93	68.91	68.89
ϕ cal100	41.40	41.20	41.01	40.82	40.62	40.43	40.24

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	68.88	68.86	68.84	68.82	68.80	68.78	68.77
ϕ cal100	40.04	39.85	39.66	39.46	39.27	39.08	38.88

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 = 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	2023-01-12

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2023-12-23

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