

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

pH calibration parameters Lot No.2404121+127 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	61.58	61.53	61.48	61.43	61.38	61.33	61.28
φ max	12.54	12.54	12.54	12.54	12.53	12.53	12.53
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.64	6.63	6.62	6.61	6.60	6.59	6.58

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.23	61.17	61.12	61.07	61.02	60.97	60.92
φ max	12.53	12.53	12.53	12.52	12.52	12.52	12.52
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.57	6.56	6.55	6.54	6.53	6.52	6.51

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	60.87	60.82	60.77	60.72	60.67	60.62	60.57
φ max	12.52	12.51	12.51	12.51	12.51	12.51	12.51
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.49	6.48	6.47	6.46	6.45	6.44	6.43

pH sensor properties

Dynamic range	pH 4.75 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.25 ; ± 0.25 pH at pH 7.25 - 7.55 (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 HP8-2211-01 (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 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.02, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH1 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166168 BLXT0067
Calibration phase offset	pH -1.70 (pH Ser. 3567, gain 7)
Date of calibration	2024-05-02

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.2404121+127 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4368	-4304	-4239	-4175	-4111	-4047	-3983
B	34398	33891	33384	32877	32370	31863	31356
C	-31181	-30720	-30258	-29797	-29336	-28874	-28413

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3919	-3854	-3790	-3726	-3662	-3598	-3534
B	30849	30341	29834	29327	28820	28313	27806
C	-27951	-27490	-27029	-26567	-26106	-25644	-25183

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3469	-3405	-3341	-3277	-3213	-3148	-3084
B	27299	26792	26285	25778	25271	24764	24256
C	-24722	-24260	-23799	-23337	-22876	-22414	-21953

DO sensor properties

Dynamic range	0 - 100 % oxygen
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 PSt3-HG-1921-01_6 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Three-point calibration at an oxygen-free environment (1.0 M sulfite system), an air-saturated environment (21% oxygen) and a pure (100%) oxygen environment (latter two with QC buffer)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH1, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: 03166168 BLXT0067
Calibration phase offset	DO -360.66 (DO Ser. 4446, gain 7)
Date of calibration	2024-05-02

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-5227
Date of sterilization	2024-04-17

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