

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

pH calibration parameters Lot No.2214121 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.43	63.35	63.26	63.18	63.09	63.00	62.92
ϕ max	14.55	14.57	14.59	14.61	14.63	14.66	14.68
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.68	6.67	6.67	6.66	6.66	6.65	6.65

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.83	62.75	62.66	62.57	62.49	62.40	62.32
ϕ max	14.70	14.72	14.75	14.77	14.79	14.81	14.83
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.64	6.64	6.63	6.62	6.62	6.61	6.61

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.23	62.14	62.06	61.97	61.88	61.80	61.71
ϕ max	14.86	14.88	14.90	14.92	14.95	14.97	14.99
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.60	6.60	6.59	6.59	6.58	6.58	6.57

pH sensor properties

Dynamic range	pH 4.75 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20 - 5.50 ; ± 0.1 pH at pH 5.50 - 7.40 ; ± 0.25 pH at pH 7.40 - 7.65 (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 HP8-2148-01 (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 ± 0.03, 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: 03515297 (BLXT 0073)
Calibration phase offset	pH -2.32 (pH Ser. 3567, gain 7)
Date of calibration	2022-12-08

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.2214121 (BioLector XT Microbioreactor, filter module ID-503)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4305	-4225	-4146	-4067	-3987	-3908	-3829
B	33890	33261	32633	32004	31376	30747	30118
C	-30706	-30132	-29558	-28984	-28410	-27836	-27262

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3749	-3670	-3591	-3512	-3432	-3353	-3274
B	29490	28861	28232	27604	26975	26347	25718
C	-26688	-26114	-25540	-24966	-24392	-23819	-23245

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3194	-3115	-3036	-2956	-2877	-2798	-2718
B	25089	24461	23832	23204	22575	21946	21318
C	-22671	-22097	-21523	-20949	-20375	-19801	-19227

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_5 (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: 03515297 (BLXT 0073)
Calibration phase offset	DO -360.87 (DO Ser. 4446, gain 7)
Date of calibration	2022-12-08

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3042
Date of sterilization	2022-11-14

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