

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

pH calibration parameters Lot No.2117121 + 2117127 (BioLector XT Microbioreactor, filter module ID-502)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	65.14	65.06	64.97	64.88	64.79	64.70	64.62
ϕ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
d <p>H</p>	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH ₀	6.30	6.29	6.28	6.27	6.26	6.25	6.24

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.53	64.44	64.35	64.26	64.18	64.09	64.00
ϕ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
d <p>H</p>	0.57	0.57	0.57	0.57	0.57	0.56	0.56
pH ₀	6.23	6.22	6.20	6.19	6.18	6.17	6.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.91	63.82	63.74	63.65	63.56	63.47	63.38
ϕ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
d <p>H</p>	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.15	6.14	6.13	6.12	6.11	6.10	6.09

pH sensor properties

Dynamic range	pH 4.25 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 - 5.10 ; ± 0.1 pH at pH 5.10 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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 HP8-1811-01_5 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -1.81 (pH Ser. 3511, gain 7)
Date of calibration	2022-01-05

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.2117121 + 2117127 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-4215	-4160	-4105	-4050	-3996	-3941	-3886
B	33205	32771	32336	31902	31468	31034	30600
C	-30105	-29710	-29315	-28920	-28525	-28130	-27735

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-3831	-3776	-3721	-3666	-3611	-3556	-3501
B	30166	29732	29298	28864	28429	27995	27561
C	-27340	-26945	-26550	-26155	-25760	-25365	-24970

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-3446	-3391	-3337	-3282	-3227	-3172	-3117
B	27127	26693	26259	25825	25391	24957	24523
C	-24575	-24180	-23785	-23390	-22995	-22600	-22205

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_2 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.63 (DO Ser. 4446, gain 7)
Date of calibration	2022-01-05

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	979401
Date of sterilization	2021-12-14

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