

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

pH calibration parameters Lot No.2208121 (BioLector II/Pro Microbioreactor, filter module ID-202/402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.62	63.55	63.47	63.39	63.31	63.24	63.16
ϕ max	13.75	13.77	13.79	13.82	13.84	13.87	13.89
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.63	6.62	6.62	6.61	6.61	6.60	6.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	63.08	63.01	62.93	62.85	62.77	62.70	62.62
ϕ max	13.91	13.94	13.96	13.99	14.01	14.03	14.06
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.59	6.59	6.58	6.58	6.57	6.57	6.56

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.54	62.46	62.39	62.31	62.23	62.15	62.08
ϕ max	14.08	14.11	14.13	14.15	14.18	14.20	14.23
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.56	6.55	6.55	6.54	6.54	6.53	6.53

pH sensor properties

Dynamic range	pH 4.65 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15 - 5.45 ; ± 0.1 pH at pH 5.45 - 7.35 ; ± 0.25 pH at pH 7.35 - 7.65 (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 HP8-2148-01 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-08-04

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.2208121 (BioLector II/Pro Microbioreactor, filter module ID-203/403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	73.64	73.60	73.55	73.50	73.45	73.40	73.35
φ cal100	43.18	42.93	42.68	42.43	42.18	41.93	41.68

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.30	73.26	73.21	73.16	73.11	73.06	73.01
φ cal100	41.44	41.19	40.94	40.69	40.44	40.19	39.94

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.96	72.91	72.87	72.82	72.77	72.72	72.67
φ cal100	39.69	39.44	39.19	38.94	38.69	38.45	38.20

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 PSt3-HG-1921-01_4 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Two-point calibration at an oxygen-free environment (1.0 M sulfite system) and an air-saturated environment (21% oxygen 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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-08-04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1064096
Date of sterilization	2022-07-28

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