

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

pH calibration parameters Lot No.2203211+2203217 (BioLector II/Pro Microbioreactor, filter module ID-221/421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	72.71	72.61	72.51	72.40	72.30	72.20	72.09
φ max	23.79	23.72	23.65	23.58	23.51	23.44	23.37
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.92	5.91	5.90	5.89	5.88	5.87	5.85

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	71.99	71.89	71.78	71.68	71.58	71.48	71.37
φ max	23.30	23.23	23.15	23.08	23.01	22.94	22.87
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.84	5.83	5.82	5.81	5.80	5.79	5.78

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	71.27	71.17	71.06	70.96	70.86	70.75	70.65
φ max	22.80	22.73	22.66	22.59	22.52	22.45	22.38
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.77	5.76	5.75	5.74	5.73	5.71	5.70

pH sensor properties

Dynamic range	pH 3.50 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.20 - 4.65 ; ± 0.1 pH at pH 4.65 - 6.60 ; ± 0.25 pH at pH 6.60 - 7.05 (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 LG1-2141-01 (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 2.00 ± 0.02 / pH 3.00 ± 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_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.68 (pH Ser. 3513, gain 8)
Date of calibration	2022-03-04

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.2203211+2203217 (BioLector II/Pro Microbioreactor, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.83	70.80	70.77	70.75	70.72	70.69	70.67
φ cal100	41.75	41.52	41.28	41.05	40.82	40.59	40.35

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.64	70.61	70.59	70.56	70.53	70.50	70.48
φ cal100	40.12	39.89	39.66	39.42	39.19	38.96	38.73

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.45	70.42	70.40	70.37	70.34	70.32	70.29
φ cal100	38.50	38.26	38.03	37.80	37.57	37.33	37.10

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-213550642+643 (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_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.83 (DO Ser. 4452, gain 4)
Date of calibration	2022-03-04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1004997
Date of sterilization	2022-02-23

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