

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

pH calibration parameters Lot No.2207121 (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	62.86	62.78	62.71	62.63	62.56	62.48	62.41
ϕ max	13.93	13.92	13.92	13.91	13.91	13.90	13.90
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.81	6.80	6.79	6.78	6.78	6.77	6.76

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.33	62.26	62.18	62.11	62.03	61.96	61.89
ϕ max	13.89	13.89	13.88	13.87	13.87	13.86	13.86
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.75	6.74	6.73	6.72	6.71	6.70	6.69

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	61.81	61.74	61.66	61.59	61.51	61.44	61.36
ϕ max	13.85	13.85	13.84	13.84	13.83	13.83	13.82
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.68	6.67	6.66	6.65	6.64	6.63	6.62

pH sensor properties

Dynamic range	pH 4.95 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.40 - 5.65 ; ± 0.1 pH at pH 5.65 - 7.40 ; ± 0.25 pH at pH 7.40 - 7.70 (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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.06 (pH Ser. 3567, gain 7)
Date of calibration	2022-07-04

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.2207121 (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	73.47	73.43	73.38	73.34	73.30	73.25	73.21
φ cal100	43.23	42.97	42.71	42.46	42.20	41.94	41.69

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.17	73.12	73.08	73.04	72.99	72.95	72.91
φ cal100	41.43	41.17	40.92	40.66	40.40	40.15	39.89

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.86	72.82	72.78	72.73	72.69	72.65	72.60
φ cal100	39.64	39.38	39.12	38.87	38.61	38.35	38.10

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 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 -360.98 (DO Ser. 4446, gain 7)
Date of calibration	2022-07-04

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1048503
Date of sterilization	2022-06-17

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