

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

pH calibration parameters Lot No.2212121 (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	62.97	62.88	62.80	62.72	62.63	62.55	62.46
φ max	14.96	14.98	15.01	15.04	15.06	15.09	15.11
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.68	6.68	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	62.38	62.29	62.21	62.13	62.04	61.96	61.87
φ max	15.14	15.16	15.19	15.21	15.24	15.26	15.29
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	61.79	61.70	61.62	61.54	61.45	61.37	61.28
φ max	15.31	15.34	15.37	15.39	15.42	15.44	15.47
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.60	6.60	6.59	6.58	6.58	6.57	6.57

pH sensor properties

Dynamic range	pH 4.80 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.25 - 5.55 ; ± 0.1 pH at pH 5.55 - 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 -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-09-21

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.2212121 (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	73.75	73.69	73.63	73.57	73.51	73.45	73.39
φ cal100	42.54	42.28	42.02	41.76	41.50	41.24	40.98

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.33	73.27	73.21	73.15	73.09	73.03	72.97
φ cal100	40.72	40.46	40.20	39.94	39.68	39.42	39.15

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.91	72.85	72.79	72.73	72.67	72.61	72.55
φ cal100	38.89	38.63	38.37	38.11	37.85	37.59	37.33

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_5 (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	2022-09-21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-07

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