

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

pH calibration parameters Lot No.2210101 (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	63.41	63.34	63.27	63.20	63.12	63.05	62.98
ϕ max	14.83	14.84	14.86	14.88	14.90	14.92	14.93
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.58	6.57	6.57	6.56	6.55	6.55	6.54

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.91	62.83	62.76	62.69	62.62	62.55	62.47
ϕ max	14.95	14.97	14.99	15.01	15.02	15.04	15.06
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.54	6.53	6.53	6.52	6.51	6.51	6.50

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	62.40	62.33	62.26	62.18	62.11	62.04	61.97
ϕ max	15.08	15.10	15.12	15.13	15.15	15.17	15.19
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.50	6.49	6.48	6.48	6.47	6.47	6.46

pH sensor properties

Dynamic range	pH 4.65 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10 - 5.40 ; ± 0.1 pH at pH 5.40 - 7.25 ; ± 0.25 pH at pH 7.25 - 7.55 (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 = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -2.04 (pH Ser. 3567, gain 7)
Date of calibration	2022-09-06

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.2210101 (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	73.32	73.28	73.23	73.19	73.15	73.11	73.06
ϕ cal100	43.36	43.13	42.89	42.66	42.43	42.19	41.96

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	73.02	72.98	72.94	72.89	72.85	72.81	72.77
ϕ cal100	41.73	41.49	41.26	41.03	40.80	40.56	40.33

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.72	72.68	72.64	72.60	72.55	72.51	72.47
ϕ cal100	40.10	39.86	39.63	39.40	39.16	38.93	38.70

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 = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.73 (DO Ser. 4446, gain 7)
Date of calibration	2022-09-06

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1069681
Date of sterilization	2022-08-11

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