

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

pH calibration parameters Lot No.2201101 (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	64.15	64.08	64.00	63.93	63.85	63.78	63.71
φ max	12.89	12.89	12.90	12.91	12.92	12.93	12.94
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.29	6.28	6.27	6.26	6.25	6.24	6.23

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.63	63.56	63.48	63.41	63.34	63.26	63.19
φ max	12.94	12.95	12.96	12.97	12.98	12.98	12.99
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.22	6.21	6.20	6.19	6.18	6.17	6.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.11	63.04	62.96	62.89	62.82	62.74	62.67
φ max	13.00	13.01	13.02	13.03	13.03	13.04	13.05
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.16	6.15	6.14	6.13	6.12	6.11	6.10

pH sensor properties

Dynamic range	pH 4.25 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 - 5.05 ; ± 0.1 pH at pH 5.05 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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 HP8-1811-01_6 (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 -2.45 (pH Ser. 3567, gain 7)
Date of calibration	2022-02-25

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.2201101 (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	73.54	73.49	73.44	73.38	73.33	73.28	73.22
ϕ cal100	44.28	44.00	43.72	43.44	43.16	42.88	42.60

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	73.17	73.12	73.07	73.01	72.96	72.91	72.85
ϕ cal100	42.32	42.04	41.75	41.47	41.19	40.91	40.63

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.80	72.75	72.69	72.64	72.59	72.54	72.48
ϕ cal100	40.35	40.07	39.79	39.51	39.23	38.95	38.67

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_2 (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 -360.83 (DO Ser. 4446, gain 7)
Date of calibration	2022-02-25

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1001695
Date of sterilization	2022-02-16

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