

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	64.29	64.21	64.14	64.06	63.99	63.92	63.84
φ max	13.05	13.05	13.06	13.07	13.08	13.09	13.09
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.21	6.21	6.20	6.19	6.18	6.17	6.16

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	63.77	63.70	63.62	63.55	63.47	63.40	63.33
φ max	13.10	13.11	13.12	13.12	13.13	13.14	13.15
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.15	6.14	6.13	6.12	6.11	6.10	6.09

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.25	63.18	63.10	63.03	62.96	62.88	62.81
φ max	13.16	13.16	13.17	13.18	13.19	13.19	13.20
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH ₀	6.08	6.07	6.06	6.05	6.04	6.03	6.02

pH sensor properties

Dynamic range	pH 4.20 - 7.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.70 - 5.00 ; ± 0.1 pH at pH 5.00 - 6.90 ; ± 0.25 pH at pH 6.90 - 7.20 (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. 3511, gain 7)
Date of calibration	2022-01-25

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	73.53	73.47	73.42	73.36	73.30	73.24	73.18
φ cal100	43.75	43.49	43.22	42.96	42.70	42.43	42.17

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.12	73.06	73.00	72.94	72.88	72.82	72.76
φ cal100	41.91	41.64	41.38	41.12	40.85	40.59	40.32

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.71	72.65	72.59	72.53	72.47	72.41	72.35
φ cal100	40.06	39.80	39.53	39.27	39.01	38.74	38.48

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	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
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	2022-01-25

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	990461
Date of sterilization	2022-01-19

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