

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

pH calibration parameters Lot No.2216121 (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	62.48	62.41	62.34	62.27	62.21	62.14	62.07
ϕ max	14.00	14.01	14.03	14.05	14.07	14.09	14.11
dpH	0.51	0.51	0.51	0.51	0.51	0.51	0.51
pH ₀	6.78	6.77	6.76	6.74	6.73	6.72	6.71

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	62.01	61.94	61.87	61.80	61.74	61.67	61.60
ϕ max	14.13	14.15	14.16	14.18	14.20	14.22	14.24
dpH	0.51	0.51	0.51	0.50	0.50	0.50	0.50
pH ₀	6.70	6.69	6.68	6.67	6.65	6.64	6.63

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	61.54	61.47	61.40	61.33	61.27	61.20	61.13
ϕ max	14.26	14.28	14.29	14.31	14.33	14.35	14.37
dpH	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH ₀	6.62	6.61	6.60	6.59	6.58	6.56	6.55

pH sensor properties

Dynamic range	pH 4.90 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.35 - 5.60 ; ± 0.1 pH at pH 5.60 - 7.35 ; ± 0.25 pH at pH 7.35 - 7.65 (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: 03515297 (BLXT 0073)
Calibration phase offset	pH -2.32 (pH Ser. 3784, gain 7)
Date of calibration	2023-01-11

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.2216121 (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	73.34	73.29	73.24	73.20	73.15	73.10	73.05
φ cal100	43.72	43.46	43.20	42.94	42.68	42.42	42.16

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.00	72.95	72.91	72.86	72.81	72.76	72.71
φ cal100	41.90	41.64	41.38	41.12	40.86	40.60	40.34

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.66	72.61	72.57	72.52	72.47	72.42	72.37
φ cal100	40.09	39.83	39.57	39.31	39.05	38.79	38.53

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: 03515297 (BLXT 0073)
Calibration phase offset	DO -360.64 (DO Ser. 4670, gain 7)
Date of calibration	2023-01-11

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	2324-3217
Date of sterilization	2022-01-23

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