

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

pH calibration parameters Lot No.2202121+2202127 (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	64.58	64.49	64.41	64.32	64.23	64.14	64.05
ϕ max	13.87	13.87	13.86	13.86	13.85	13.85	13.85
dpH	0.52	0.52	0.52	0.52	0.53	0.53	0.53
pH ₀	6.26	6.25	6.25	6.24	6.23	6.22	6.22

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	63.96	63.88	63.79	63.70	63.61	63.52	63.43
ϕ max	13.84	13.84	13.84	13.83	13.83	13.83	13.82
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.21	6.20	6.19	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	63.35	63.26	63.17	63.08	62.99	62.91	62.82
ϕ max	13.82	13.82	13.81	13.81	13.81	13.80	13.80
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.16	6.15	6.14	6.14	6.13	6.12	6.11

pH sensor properties

Dynamic range	pH 4.35 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.80 - 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 = 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 -2.45 (pH Ser. 3567, gain 7)
Date of calibration	2022-03-10

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.2202121+2202127 (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	74.12	74.07	74.01	73.96	73.91	73.85	73.80
ϕ cal100	43.52	43.26	42.99	42.73	42.46	42.20	41.93

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	73.74	73.69	73.64	73.58	73.53	73.48	73.42
ϕ cal100	41.67	41.40	41.14	40.87	40.61	40.34	40.08

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	73.37	73.32	73.26	73.21	73.15	73.10	73.05
ϕ cal100	39.81	39.55	39.29	39.02	38.76	38.49	38.23

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_4 (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 -360.83 (DO Ser. 4446, gain 7)
Date of calibration	2022-03-10

Sterilization procedure

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

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