

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

pH calibration parameters Lot No.2209201 (BioLector II/Pro Microbioreactor, filter module ID-221/421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	71.84	71.76	71.68	71.59	71.51	71.43	71.34
ϕ max	22.79	22.73	22.66	22.59	22.53	22.46	22.39
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	6.03	6.02	6.01	6.00	5.98	5.97	5.96

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	71.26	71.18	71.09	71.01	70.93	70.84	70.76
ϕ max	22.33	22.26	22.19	22.13	22.06	21.99	21.93
dpH	0.70	0.70	0.70	0.71	0.71	0.71	0.71
pH ₀	5.95	5.94	5.93	5.91	5.90	5.89	5.88

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	70.68	70.59	70.51	70.43	70.34	70.26	70.18
ϕ max	21.86	21.79	21.73	21.66	21.59	21.52	21.46
dpH	0.71	0.71	0.71	0.71	0.71	0.71	0.71
pH ₀	5.87	5.86	5.84	5.83	5.82	5.81	5.80

pH sensor properties

Dynamic range	pH 3.50 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.85 ; ± 0.25 pH at pH 6.85 - 7.35 (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 LG1-2141-01 (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 2.00 ± 0.02 / pH 3.00 ± 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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-09-01

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

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

DO calibration parameters Lot No.2209201 (BioLector II/Pro Microbioreactor, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.60	70.58	70.56	70.54	70.52	70.50	70.48
φ cal100	41.57	41.36	41.14	40.93	40.72	40.50	40.29

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.46	70.44	70.42	70.40	70.39	70.37	70.35
φ cal100	40.08	39.87	39.65	39.44	39.23	39.02	38.80

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	70.33	70.31	70.29	70.27	70.25	70.23	70.21
φ cal100	38.59	38.38	38.16	37.95	37.74	37.53	37.31

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 RF-221155396 (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_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-09-01

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1065724
Date of sterilization	2022-08-01

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