

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

pH calibration parameters Lot No.2212202 (BioLector XT Microbioreactor, filter module ID-521)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.71	69.62	69.54	69.46	69.37	69.29	69.21
φ max	21.92	21.85	21.77	21.70	21.62	21.55	21.47
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.92	5.90	5.89	5.88	5.86	5.85	5.84

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	69.12	69.04	68.95	68.87	68.79	68.70	68.62
φ max	21.40	21.32	21.25	21.17	21.10	21.02	20.95
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.83	5.81	5.80	5.79	5.77	5.76	5.75

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.53	68.45	68.37	68.28	68.20	68.12	68.03
φ max	20.88	20.80	20.73	20.65	20.58	20.50	20.43
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.73	5.72	5.71	5.69	5.68	5.67	5.65

pH sensor properties

Dynamic range	pH 3.55 - 7.75
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.55 ; ± 0.25 pH at pH 6.55 - 7.05 (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 LG1-2212-01 (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	2022-09-26

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.2212202 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1956	-1916	-1877	-1838	-1799	-1759	-1720
B	15105	14796	14487	14178	13869	13560	13251
C	-13381	-13101	-12821	-12542	-12262	-11982	-11703

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1681	-1641	-1602	-1563	-1524	-1484	-1445
B	12943	12634	12325	12016	11707	11398	11089
C	-11423	-11143	-10864	-10584	-10304	-10025	-9745

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1406	-1367	-1327	-1288	-1249	-1209	-1170
B	10780	10471	10162	9853	9544	9235	8927
C	-9465	-9185	-8906	-8626	-8346	-8067	-7787

DO sensor properties

Dynamic range	0 - 100 % oxygen
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 (t90)	< 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-221155398 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Three-point calibration at an oxygen-free environment (1.0 M sulfite system), an air-saturated environment (21% oxygen) and a pure (100%) oxygen environment (latter two 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	2022-09-26

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1078918
Date of sterilization	2022-09-07

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