

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

pH calibration parameters Lot No.2304311 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	75.13	75.19	75.24	75.30	75.36	75.42	75.47
φ max	15.38	15.43	15.48	15.52	15.57	15.62	15.67
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.40	-0.40
pH ₀	5.23	5.22	5.22	5.21	5.21	5.20	5.20

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	75.53	75.59	75.64	75.70	75.76	75.82	75.87
φ max	15.71	15.76	15.81	15.85	15.90	15.95	16.00
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.19	5.18	5.18	5.17	5.17	5.16	5.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	75.93	75.99	76.04	76.10	76.16	76.22	76.27
φ max	16.04	16.09	16.14	16.18	16.23	16.28	16.33
dpH	-0.40	-0.40	-0.40	-0.39	-0.39	-0.39	-0.39
pH ₀	5.15	5.15	5.14	5.14	5.13	5.13	5.12

pH sensor properties

Dynamic range	pH 3.55 - 6.45
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.90 - 4.10 ; ± 0.1 pH at pH 4.10 - 5.95 ; ± 0.25 pH at pH 5.95 - 6.15 (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 pH51-2211553833+384+392 (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 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.17 (pH Ser. 3587, gain 6)
Date of calibration	2023-03-15

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 BioLecton software!

DO calibration parameters Lot No.2304311 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1669	-1638	-1607	-1577	-1546	-1515	-1485
B	12797	12557	12317	12076	11836	11596	11356
C	-11242	-11026	-10810	-10594	-10377	-10161	-9945

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1454	-1423	-1393	-1362	-1331	-1301	-1270
B	11116	10876	10636	10396	10155	9915	9675
C	-9728	-9512	-9296	-9079	-8863	-8647	-8431

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1239	-1209	-1178	-1147	-1117	-1086	-1055
B	9435	9195	8955	8715	8474	8234	7994
C	-8214	-7998	-7782	-7565	-7349	-7133	-6916

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 (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-230250060 (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 = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.66 (DO Ser. 4452, gain 4)
Date of calibration	2023-03-15

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3482
Date of sterilization	2023-03-09

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