

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

pH calibration parameters Lot No.2206301+2206397 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	65.86	65.97	66.08	66.19	66.30	66.41	66.52
φ max	7.91	7.93	7.96	7.98	8.00	8.02	8.05
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH ₀	5.59	5.59	5.58	5.57	5.57	5.56	5.55

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	66.63	66.74	66.85	66.96	67.07	67.18	67.29
φ max	8.07	8.09	8.11	8.14	8.16	8.18	8.20
dpH	-0.40	-0.40	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.55	5.54	5.54	5.53	5.52	5.52	5.51

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.40	67.51	67.62	67.73	67.84	67.95	68.06
φ max	8.23	8.25	8.27	8.29	8.31	8.34	8.36
dpH	-0.39	-0.39	-0.39	-0.39	-0.39	-0.38	-0.38
pH ₀	5.51	5.50	5.49	5.49	5.48	5.48	5.47

pH sensor properties

Dynamic range	pH 4.00 - 6.80
Resolution	Up to 0.01 pH (software) ± 0.25 pH at pH 4.35 - 4.50 ; ± 0.1 pH at pH 4.50 - 6.30 ; ± 0.25 pH at pH 6.30 - 6.50 (batch calibration)
Accuracy	
Response time (t ₉₀)	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 pH51-202850569-571 (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 = pH_DO_calibration_BOH3, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.12 (pH Ser. 3587, gain 6)
Date of calibration	2022-05-18

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. 2206301 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1915	-1880	-1846	-1811	-1776	-1742	-1707
B	14794	14521	14248	13976	13703	13431	13158
C	-13106	-12859	-12613	-12367	-12121	-11874	-11628

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1672	-1637	-1603	-1568	-1533	-1499	-1464
B	12885	12613	12340	12068	11795	11522	11250
C	-11382	-11135	-10889	-10643	-10396	-10150	-9904

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1429	-1394	-1360	-1325	-1290	-1256	-1221
B	10977	10705	10432	10159	9887	9614	9341
C	-9657	-9411	-9165	-8918	-8672	-8426	-8180

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-213550644 (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 O ₂ buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-18

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1035388
Date of sterilization	2022-05-10

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