

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

pH calibration parameters Lot No.2209301 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	60.13	60.38	60.64	60.89	61.15	61.40	61.66
φ max	10.88	10.91	10.95	10.98	11.01	11.04	11.07
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.46	5.46	5.45	5.44	5.44	5.43	5.43

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.91	62.16	62.42	62.67	62.93	63.18	63.44
φ max	11.11	11.14	11.17	11.20	11.24	11.27	11.30
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.42	5.41	5.41	5.40	5.39	5.39	5.38

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	63.69	63.94	64.20	64.45	64.71	64.96	65.22
φ max	11.33	11.37	11.40	11.43	11.46	11.49	11.53
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.37	5.37	5.36	5.35	5.35	5.34	5.33

pH sensor properties

Dynamic range	pH 4.10 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.40 - 4.55 ; ± 0.1 pH at pH 4.55 - 6.10 ; ± 0.25 pH at pH 6.10 - 6.25 (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 pH51-211650285 (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 -360.94 (pH Ser. 3587, gain 6)
Date of calibration	2022-08-19

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.2209301 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1904	-1868	-1832	-1796	-1760	-1724	-1688
B	14710	14427	14144	13860	13577	13294	13011
C	-13037	-12781	-12524	-12267	-12011	-11754	-11497

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1652	-1616	-1580	-1544	-1508	-1472	-1436
B	12728	12444	12161	11878	11595	11312	11028
C	-11241	-10984	-10727	-10471	-10214	-9957	-9701

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1400	-1364	-1328	-1292	-1256	-1220	-1184
B	10745	10462	10179	9896	9613	9329	9046
C	-9444	-9187	-8931	-8674	-8417	-8161	-7904

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-221155396 (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_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 -360.76 (DO Ser. 4452, gain 4)
Date of calibration	2022-08-19

Sterilization procedure

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

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