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

pH calibration parameters Lot No.2216301+2216307 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	72.39	72.46	72.52	72.58	72.64	72.71	72.77
ϕ max	15.39	15.43	15.46	15.50	15.54	15.57	15.61
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH_0	5.27	5.27	5.26	5.26	5.25	5.25	5.25

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	72.83	72.89	72.96	73.02	73.08	73.15	73.21
ϕ max	15.64	15.68	15.72	15.75	15.79	15.82	15.86
dpH	-0.41	-0.41	-0.41	-0.41	-0.40	-0.40	-0.40
pH_0	5.24	5.24	5.23	5.23	5.22	5.22	5.21

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	73.27	73.33	73.40	73.46	73.52	73.59	73.65
ϕ max	15.90	15.93	15.97	16.00	16.04	16.08	16.11
dpH	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
pH_0	5.21	5.21	5.20	5.20	5.19	5.19	5.18

pH sensor properties

Dynamic range	pH 3.70 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.00 - 4.20 ; ± 0.1 pH at pH 4.20 - 6.05 ; ± 0.25 pH at pH 6.05 - 6.20 (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 pH51-221155387-389 (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: 03515297 (BLXT 0073)
Calibration phase offset	pH -367.74 (pH Ser. 3587, gain 6)
Date of calibration	2023-01-12

Contact us

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· 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.2216301+2216307 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-3370	-3269	-3168	-3067	-2966	-2865	-2764
B	26331	25531	24730	23930	23130	22329	21529
C	-23667	-22935	-22204	-21472	-20741	-20009	-19278

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-2663	-2562	-2461	-2360	-2259	-2158	-2057
B	20728	19928	19128	18327	17527	16726	15926
C	-18547	-17815	-17084	-16352	-15621	-14889	-14158

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1956	-1855	-1754	-1653	-1552	-1452	-1351
B	15126	14325	13525	12725	11924	11124	10323
C	-13426	-12695	-11964	-11232	-10501	-9769	-9038

DO sensor properties

Dynamic range	0 - 100 % oxygen
Resolution	Up to 0.1 % O2 (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O2 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-224858176 (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: 03515297 (BLXT 0073)
Calibration phase offset	DO -360.77 (DO Ser. 4671, gain 4)
Date of calibration	2023-01-12

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2022-12-23

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