

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

pH calibration parameters Lot No.2205327 (BioLector XT Microbioreactor, filter module ID-524)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	63.69	63.82	63.94	64.06	64.19	64.31	64.44
ϕ max	7.36	7.36	7.37	7.38	7.38	7.39	7.39
d <p>H</p>	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.57	5.56	5.56	5.55	5.55	5.54	5.54

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	64.56	64.68	64.81	64.93	65.06	65.18	65.30
ϕ max	7.40	7.41	7.41	7.42	7.42	7.43	7.44
d <p>H</p>	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
pH ₀	5.53	5.53	5.52	5.52	5.51	5.51	5.50

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	65.43	65.55	65.68	65.80	65.92	66.05	66.17
ϕ max	7.44	7.45	7.45	7.46	7.47	7.47	7.48
d <p>H</p>	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
pH ₀	5.50	5.49	5.49	5.49	5.48	5.48	5.47

pH sensor properties

Dynamic range	pH 4.00 - 6.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.35 - 4.55 ; ± 0.1 pH at pH 4.55 - 6.35 ; ± 0.25 pH at pH 6.35 - 6.50 (batch calibration)
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 pH51-202850568 (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 Round Well Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -361.12 (pH Ser. 3587, gain 6)
Date of calibration	2022-05-03

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.2205327 (BioLector XT Microbioreactor, filter module ID-528)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
A	-1685	-1664	-1643	-1622	-1601	-1580	-1560
B	12951	12789	12627	12466	12304	12142	11981
C	-11405	-11262	-11118	-10974	-10831	-10687	-10544

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
A	-1539	-1518	-1497	-1476	-1455	-1434	-1413
B	11819	11657	11496	11334	11172	11011	10849
C	-10400	-10257	-10113	-9970	-9826	-9683	-9539

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
A	-1393	-1372	-1351	-1330	-1309	-1288	-1267
B	10688	10526	10364	10203	10041	9879	9718
C	-9396	-9252	-9109	-8965	-8822	-8678	-8535

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 OC 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 Round Well Plate (MTP-RMF32C-BOH3)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.89 (DO Ser. 4452, gain 4)
Date of calibration	2022-05-03

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1029868
Date of sterilization	2022-04-26

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