

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

pH calibration parameters Lot No.2111311 (BioLector® Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	66.90	66.97	67.04	67.10	67.17	67.23	67.30
φ max	13.45	13.49	13.53	13.57	13.60	13.64	13.68
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.41
pH ₀	5.37	5.37	5.36	5.36	5.35	5.35	5.35

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	67.37	67.43	67.50	67.56	67.63	67.70	67.76
φ max	13.72	13.76	13.79	13.83	13.87	13.91	13.95
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41
pH ₀	5.34	5.34	5.33	5.33	5.32	5.32	5.31

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	67.83	67.89	67.96	68.03	68.09	68.16	68.22
φ max	13.99	14.02	14.06	14.10	14.14	14.18	14.21
dpH	-0.41	-0.41	-0.41	-0.41	-0.40	-0.40	-0.40
pH ₀	5.31	5.30	5.30	5.29	5.29	5.29	5.28

pH sensor properties

Dynamic range	pH 3.70 - 6.60
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.05-4.25; ± 0.1 pH at pH 4.25-6.10; ± 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 pH51-202850551 (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 ± 0.01 / pH 3.00 ± 0.015 / pH 7.00 ± 0.01 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH51-RF-calibration, 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: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2021-08-16

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DO calibration parameters Lot No.2111311 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	71.84	71.83	71.82	71.81	71.80	71.79	71.78
φ cal100	42.02	41.86	41.70	41.55	41.39	41.23	41.07

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	71.77	71.76	71.75	71.74	71.73	71.72	71.71
φ cal100	40.91	40.76	40.60	40.44	40.28	40.12	39.96

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.70	71.69	71.68	71.67	71.66	71.65	71.64
φ cal100	39.81	39.65	39.49	39.33	39.17	39.02	38.86

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
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-210250003 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = pH51-RF-calibration, 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: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-08-16

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	928111
Date of sterilization	2021-08-05

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