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

pH calibration parameters Lot No.2107311 and 2107317 (BioLector® Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	59.11	59.18	59.24	59.31	59.37	59.44	59.50
ϕ max	7.52	7.53	7.54	7.55	7.56	7.57	7.58
dpH	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH_0	5.59	5.58	5.58	5.57	5.57	5.56	5.56

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	59.57	59.64	59.70	59.77	59.83	59.90	59.96
ϕ max	7.59	7.60	7.61	7.62	7.63	7.64	7.65
dpH	-0.42	-0.42	-0.41	-0.41	-0.41	-0.41	-0.41
pH_0	5.55	5.55	5.54	5.54	5.53	5.53	5.52

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	60.03	60.09	60.16	60.22	60.29	60.35	60.42
ϕ max	7.66	7.67	7.68	7.69	7.71	7.72	7.73
dpH	-0.41	-0.41	-0.41	-0.41	-0.41	-0.41	-0.40
pH_0	5.52	5.51	5.51	5.50	5.50	5.49	5.49

pH sensor properties

Dynamic range	pH 3.90 - 6.85
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.30-4.50; ± 0.1 pH at pH 4.50-6.30; ± 0.25 pH at pH 6.30-6.50 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 pH51-200950177 (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 Round Well Plate (MTP-RMF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2021-06-17

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DO calibration parameters Lot No.2107311 and 2107317 (BioLector® Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.43	71.45	71.46	71.47	71.49	71.50	71.51
ϕ cal100	41.81	41.66	41.50	41.34	41.18	41.02	40.87

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.53	71.54	71.55	71.56	71.58	71.59	71.60
ϕ cal100	40.71	40.55	40.39	40.23	40.08	39.92	39.76

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.62	71.63	71.64	71.66	71.67	71.68	71.70
ϕ cal100	39.60	39.44	39.29	39.13	38.97	38.81	38.65

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
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-210250002 (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 Round Well Plate (MTP-RMF32-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-06-17

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	901348
Date of sterilization	2021-05-31

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