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

pH calibration parameters Lot No.2110301 (BioLector® II/Pro, filter module ID-424)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	67.45	67.50	67.54	67.58	67.62	67.66	67.70
ϕ max	15.75	15.80	15.85	15.91	15.96	16.01	16.06
dpH	-0.43	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
pH_0	5.27	5.26	5.26	5.25	5.25	5.24	5.23

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	67.74	67.78	67.82	67.86	67.90	67.94	67.98
ϕ max	16.11	16.16	16.21	16.26	16.32	16.37	16.42
dpH	-0.42	-0.42	-0.41	-0.41	-0.41	-0.41	-0.41
pH_0	5.23	5.22	5.22	5.21	5.20	5.20	5.19

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	68.02	68.06	68.10	68.14	68.18	68.22	68.26
ϕ max	16.47	16.52	16.57	16.62	16.67	16.73	16.78
dpH	-0.41	-0.41	-0.40	-0.40	-0.40	-0.40	-0.40
pH_0	5.19	5.18	5.17	5.17	5.16	5.16	5.15

pH sensor properties

Dynamic range	pH 3.60 - 6.55
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 3.95-4.20; ± 0.1 pH at pH 4.20-6.00; ± 0.25 pH at pH 6.00-6.20 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 pH51-202850546+547 (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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -360.10 (pH Ser. 3288, gain 6)
Date of calibration	2021-08-20

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DO calibration parameters Lot No.2110301 (BioLector® II/Pro, filter module ID-228/-428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	71.87	71.85	71.84	71.83	71.81	71.80	71.78
ϕ cal100	42.24	42.08	41.91	41.74	41.58	41.41	41.25

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	71.77	71.75	71.74	71.73	71.71	71.70	71.68
ϕ cal100	41.08	40.91	40.75	40.58	40.41	40.25	40.08

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	71.67	71.66	71.64	71.63	71.61	71.60	71.58
ϕ cal100	39.92	39.75	39.58	39.42	39.25	39.08	38.92

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-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 = Flower Plate (MTP-48-BOH3)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.44 (DO Ser. 4302-RD, gain 4)
Date of calibration	2021-08-20

Sterilization procedure

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

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