

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

pH calibration parameters Lot No. 1720 (BioLector® II/Pro, filter module ID-221)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ min	66.23	66.06	65.89	65.72	65.54	65.37	65.20
ϕ max	5.47	5.42	5.36	5.30	5.25	5.19	5.14
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.74	5.73	5.72	5.71	5.70	5.69	5.68
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ min	65.03	64.86	64.69	64.52	64.35	64.18	64.01
ϕ max	5.08	5.02	4.97	4.91	4.86	4.80	4.74
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.67	5.66	5.65	5.64	5.63	5.62	5.61
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ min	63.83	63.66	63.49	63.32	63.15	62.98	62.81
ϕ max	4.69	4.63	4.58	4.52	4.46	4.41	4.35
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.60	5.59	5.58	5.57	5.56	5.55	5.54

pH sensor properties

Dynamic range	pH 2.15 - 8.40
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 2.90 - 3.95; ± 0.1 pH at pH 3.95 - 6.60; ± 0.25 pH at pH 6.60 - 7.70 (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 LG1-1629 (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 1.00 ± 0.01 / pH 2.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrate-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	pH -360.78 (pH Ser.3188-RD, gain 8)
Date of calibration	2017/10/23

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DO calibration parameters Lot No. 1720 (BioLector® II/Pro, filter module ID-228)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
ϕ cal0	68.06	68.03	68.00	67.96	67.93	67.90	67.86
ϕ cal100	42.81	42.57	42.33	42.10	41.86	41.62	41.38
Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	67.83	67.80	67.76	67.73	67.70	67.67	67.63
ϕ cal100	41.14	40.90	40.66	40.42	40.18	39.94	39.70
Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	67.60	67.57	67.53	67.50	67.47	67.43	67.40
ϕ cal100	39.46	39.22	38.99	38.75	38.51	38.27	38.03

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 (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-01/2017 (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 = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic FlowerPlate (MTP-MF32-BOH)
Calibration device	Hardware ID: BL-02-000F-0032
Calibration phase offset	DO -360.52(DO Ser.4170-RD, gain 4)
Date of calibration	2017/10/23

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	426134
Date of sterilization	2017/10/17

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