

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

pH calibration parameters Lot No.2311101 (BioLector® II/Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.21	62.14	62.07	62.00	61.93	61.86	61.79
φ max	16.07	16.07	16.07	16.08	16.08	16.08	16.09
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.74	6.73	6.73	6.72	6.72	6.71	6.71

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.72	61.65	61.57	61.50	61.43	61.36	61.29
φ max	16.09	16.10	16.10	16.10	16.11	16.11	16.11
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.70	6.70	6.69	6.69	6.68	6.68	6.67

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.22	61.15	61.08	61.00	60.93	60.86	60.79
φ max	16.12	16.12	16.12	16.13	16.13	16.14	16.14
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.67	6.66	6.66	6.65	6.65	6.64	6.64

pH sensor properties

Dynamic range	pH 4.90 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.35-5.60; ± 0.1 pH at pH 5.60-7.40; ± 0.25 pH at pH 7.40-7.70 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 HP8-2148-01_2 (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 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.40 (pH Ser. 3111, gain 7)
Date of calibration	2023-07-21

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.2311101 (BioLector® II/Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	72.34	72.30	72.25	72.21	72.16	72.12	72.07
φ cal100	42.96	42.77	42.58	42.38	42.19	42.00	41.81

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.03	71.98	71.94	71.89	71.85	71.80	71.76
φ cal100	41.61	41.42	41.23	41.03	40.84	40.65	40.45

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	71.71	71.67	71.62	71.58	71.53	71.49	71.44
φ cal100	40.26	40.07	39.88	39.68	39.49	39.30	39.10

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 PSt3-HG-1921-01_5 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	1.0 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = HP8-PSt3-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.25 (DO Ser. 4103, gain 7)
Date of calibration	2023-07-21

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4031
Date of sterilization	2023-07-13

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