

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

pH calibration parameters Lot No.2401101 (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	61.51	61.44	61.37	61.30	61.23	61.15	61.08
φ max	12.93	12.93	12.93	12.93	12.93	12.93	12.93
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.48	6.47	6.47	6.46	6.46	6.46	6.45

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.01	60.94	60.87	60.79	60.72	60.65	60.58
φ max	12.93	12.93	12.93	12.93	12.93	12.93	12.93
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.45	6.44	6.44	6.43	6.43	6.42	6.42

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	60.51	60.44	60.36	60.29	60.22	60.15	60.08
φ max	12.93	12.93	12.93	12.93	12.93	12.93	12.93
dpH	0.52	0.52	0.52	0.52	0.52	0.52	0.52
pH ₀	6.41	6.41	6.41	6.40	6.40	6.39	6.39

pH sensor properties

Dynamic range	pH 4.55 - 8.00
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.00-5.30; ± 0.1 pH at pH 5.30-7.20; ± 0.25 pH at pH 7.20-7.50 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 HP8-2211-01 (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	2024-02-28

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.2401101 (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	72.92	72.86	72.80	72.73	72.67	72.61	72.55
ϕ cal100	43.66	43.46	43.25	43.05	42.84	42.63	42.43

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
ϕ cal0	72.49	72.42	72.36	72.30	72.24	72.17	72.11
ϕ cal100	42.22	42.02	41.81	41.61	41.40	41.19	40.99

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
ϕ cal0	72.05	71.99	71.92	71.86	71.80	71.74	71.68
ϕ cal100	40.78	40.58	40.37	40.16	39.96	39.75	39.55

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	2024-02-28

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-4871
Date of sterilization	2024-02-02

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