

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

pH calibration parameters Lot No.2305101 (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	62.87	62.80	62.73	62.66	62.59	62.53	62.46
φ max	14.36	14.38	14.39	14.40	14.41	14.42	14.44
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.65	6.65	6.64	6.64	6.63	6.63	6.62

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.39	62.32	62.25	62.18	62.11	62.04	61.98
φ max	14.45	14.46	14.47	14.48	14.50	14.51	14.52
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.62	6.61	6.61	6.60	6.60	6.59	6.58

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.91	61.84	61.77	61.70	61.63	61.56	61.49
φ max	14.53	14.54	14.56	14.57	14.58	14.59	14.60
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH ₀	6.58	6.57	6.57	6.56	6.56	6.55	6.55

pH sensor properties

Dynamic range	pH 4.70 - 8.15
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15-5.45; ± 0.1 pH at pH 5.45-7.35; ± 0.25 pH at pH 7.35-7.65 batch calibration
Response time (t ₉₀)	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 (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	2023-03-30

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.2305101 (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	73.16	73.10	73.04	72.98	72.92	72.86	72.80
φ cal100	42.72	42.52	42.31	42.11	41.91	41.71	41.51

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.74	72.68	72.62	72.56	72.50	72.44	72.38
φ cal100	41.31	41.11	40.91	40.71	40.51	40.31	40.10

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.32	72.26	72.20	72.14	72.08	72.02	71.96
φ cal100	39.90	39.70	39.50	39.30	39.10	38.90	38.70

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	2023-03-30

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3541
Date of sterilization	2023-03-22

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