

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

pH calibration parameters Lot No.2308101 (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	62.84	62.76	62.69	62.61	62.54	62.46	62.39
φ max	14.90	14.90	14.90	14.89	14.89	14.89	14.88
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.61	6.60	6.60	6.59	6.59	6.58	6.57

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.32	62.24	62.17	62.09	62.02	61.94	61.87
φ max	14.88	14.88	14.87	14.87	14.87	14.87	14.86
dpH	0.53	0.53	0.53	0.53	0.53	0.53	0.53
pH ₀	6.57	6.56	6.56	6.55	6.55	6.54	6.54

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.79	61.72	61.65	61.57	61.50	61.42	61.35
φ max	14.86	14.86	14.85	14.85	14.85	14.84	14.84
dpH	0.54	0.54	0.54	0.54	0.54	0.54	0.54
pH ₀	6.53	6.53	6.52	6.52	6.51	6.51	6.50

pH sensor properties

Dynamic range	pH 4.70 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.15-5.45; ± 0.1 pH at pH 5.45-7.30; ± 0.25 pH at pH 7.30-7.60 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_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	2023-05-11

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.2308101 (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	73.28	73.22	73.16	73.10	73.04	72.98	72.92
φ cal100	43.05	42.86	42.66	42.46	42.26	42.06	41.87

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.86	72.80	72.74	72.68	72.62	72.56	72.50
φ cal100	41.67	41.47	41.27	41.08	40.88	40.68	40.48

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.44	72.38	72.32	72.26	72.19	72.13	72.07
φ cal100	40.28	40.09	39.89	39.69	39.49	39.29	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	2023-05-11

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3217
Date of sterilization	2023-04-26

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