

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

pH calibration parameters Lot No.2301121 (BioLector® Pro, filter module ID-202/-402)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	62.97	62.90	62.82	62.75	62.68	62.61	62.53
φ max	15.12	15.14	15.15	15.17	15.18	15.20	15.22
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.62	6.62	6.61	6.61	6.60	6.59	6.59

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	62.46	62.39	62.31	62.24	62.17	62.09	62.02
φ max	15.23	15.25	15.26	15.28	15.30	15.31	15.33
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.58	6.58	6.57	6.57	6.56	6.56	6.55

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.95	61.88	61.80	61.73	61.66	61.58	61.51
φ max	15.34	15.36	15.38	15.39	15.41	15.43	15.44
dpH	0.58	0.58	0.58	0.58	0.58	0.58	0.58
pH ₀	6.55	6.54	6.53	6.53	6.52	6.52	6.51

pH sensor properties

Dynamic range	pH 4.55 - 8.20
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.10-5.40; ± 0.1 pH at pH 5.40-7.35; ± 0.25 pH at pH 7.35-7.70 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 (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 = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	pH -1.40 (pH Ser. 3111, gain 7)
Date of calibration	2023-02-07

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.2301121 (BioLector® Pro, filter module ID-203/-403)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	73.01	72.96	72.92	72.87	72.82	72.77	72.72
φ cal100	41.67	41.48	41.29	41.10	40.91	40.72	40.53

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.67	72.63	72.58	72.53	72.48	72.43	72.38
φ cal100	40.34	40.15	39.96	39.77	39.58	39.39	39.20

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.33	72.29	72.24	72.19	72.14	72.09	72.04
φ cal100	39.01	38.81	38.62	38.43	38.24	38.05	37.86

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_2 (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 = Microfluidic Flower Plate (MTP-MF32C-BOH1)
Calibration device	Hardware ID: BL-09-000F-0032
Calibration phase offset	DO -360.25 (DO Ser. 4103, gain 7)
Date of calibration	2023-02-07

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
Steris Process Run ID	2324-3310
Date of sterilization	2023-01-26

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