

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

**pH calibration parameters Lot No.2301101 (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	62.38	62.33	62.27	62.22	62.16	62.10	62.05
φ max	14.40	14.42	14.44	14.46	14.48	14.50	14.52
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.55
pH <sub>0</sub>	6.69	6.68	6.67	6.66	6.65	6.64	6.63

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	61.99	61.94	61.88	61.82	61.77	61.71	61.66
φ max	14.54	14.56	14.58	14.61	14.63	14.65	14.67
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.62	6.61	6.59	6.58	6.57	6.56	6.55

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	61.60	61.54	61.49	61.43	61.38	61.32	61.26
φ max	14.69	14.71	14.73	14.75	14.77	14.79	14.81
dpH	0.55	0.55	0.55	0.55	0.55	0.55	0.55
pH <sub>0</sub>	6.54	6.53	6.52	6.51	6.50	6.48	6.47

**pH sensor properties**

Dynamic range	pH 4.75 - 8.10
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 5.20-5.50; ± 0.1 pH at pH 5.50-7.30; ± 0.25 pH at pH 7.30-7.60 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) <b>pH sensors are light-sensitive; please protect them from direct light!</b>

**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	2023-02-06

**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](http://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

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

**DO calibration parameters Lot No.2301101 (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	72.71	72.67	72.62	72.58	72.54	72.49	72.45
φ cal100	43.00	42.79	42.58	42.37	42.15	41.94	41.73

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	72.41	72.36	72.32	72.28	72.23	72.19	72.15
φ cal100	41.52	41.30	41.09	40.88	40.67	40.45	40.24

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	72.10	72.06	72.01	71.97	71.93	71.88	71.84
φ cal100	40.03	39.82	39.61	39.39	39.18	38.97	38.76

### DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O <sub>2</sub> (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O <sub>2</sub> per day (sampling interval of 6 min)
Response time (t <sub>90</sub> )	< 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) <b>DO sensors are light-sensitive; please protect them from direct light!</b>

### 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	2023-02-06

### Sterilization procedure

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

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