

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

**pH calibration parameters Lot No.2117121 + 2117127 (BioLector II/Pro Microbioreactor, filter module ID-202/402)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
$\phi$ min	65.14	65.06	64.97	64.88	64.79	64.70	64.62
$\phi$ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
dpH	0.57	0.57	0.57	0.57	0.57	0.57	0.57
pH <sub>0</sub>	6.30	6.29	6.28	6.27	6.26	6.25	6.24

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
$\phi$ min	64.53	64.44	64.35	64.26	64.18	64.09	64.00
$\phi$ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
dpH	0.57	0.57	0.57	0.57	0.57	0.56	0.56
pH <sub>0</sub>	6.23	6.22	6.20	6.19	6.18	6.17	6.16

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
$\phi$ min	63.91	63.82	63.74	63.65	63.56	63.47	63.38
$\phi$ max	14.60	14.60	14.60	14.60	14.60	14.60	14.60
dpH	0.56	0.56	0.56	0.56	0.56	0.56	0.56
pH <sub>0</sub>	6.15	6.14	6.13	6.12	6.11	6.10	6.09

**pH sensor properties**

Dynamic range	pH 4.25 - 7.80
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.75 - 5.10 ; ± 0.1 pH at pH 5.10 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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 HP8-1811-01_5 (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 Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH1 , 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: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -1.81 (pH Ser. 3511, gain 7)
Date of calibration	2022-01-05

**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

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**DO calibration parameters Lot No.2117121 + 2117127 (BioLector II/Pro Microbioreactor, filter module ID-203/403)**

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	73.79	73.74	73.69	73.63	73.58	73.53	73.47
φ cal100	43.90	43.66	43.43	43.19	42.96	42.72	42.49

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	73.42	73.37	73.31	73.26	73.21	73.16	73.10
φ cal100	42.25	42.02	41.78	41.55	41.31	41.08	40.84

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	73.05	73.00	72.94	72.89	72.84	72.78	72.73
φ cal100	40.61	40.37	40.14	39.90	39.67	39.43	39.20

**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_2 (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	0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment)
Settings	BioLector protocol = MF_pH_DO_calibration_BOH1 , 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: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.63 (DO Ser. 4446, gain 7)
Date of calibration	2022-01-05

**Sterilization procedure**

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	979401
Date of sterilization	2021-12-14

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