

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

**pH calibration parameters Lot No.2318107 (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           | 61.30 | 61.25 | 61.19 | 61.14 | 61.08 | 61.03 | 60.97 |
| φ max           | 12.92 | 12.92 | 12.92 | 12.92 | 12.92 | 12.92 | 12.92 |
| dpH             | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  |
| pH <sub>0</sub> | 6.59  | 6.58  | 6.57  | 6.56  | 6.55  | 6.54  | 6.54  |

| Temperature     | 27°C  | 28°C  | 29°C  | 30°C  | 31°C  | 32°C  | 33°C  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min           | 60.92 | 60.86 | 60.81 | 60.75 | 60.69 | 60.64 | 60.58 |
| φ max           | 12.92 | 12.91 | 12.91 | 12.91 | 12.91 | 12.91 | 12.91 |
| dpH             | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  |
| pH <sub>0</sub> | 6.53  | 6.52  | 6.51  | 6.50  | 6.49  | 6.48  | 6.48  |

| Temperature     | 34°C  | 35°C  | 36°C  | 37°C  | 38°C  | 39°C  | 40°C  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min           | 60.53 | 60.47 | 60.42 | 60.36 | 60.31 | 60.25 | 60.20 |
| φ max           | 12.91 | 12.91 | 12.91 | 12.91 | 12.91 | 12.91 | 12.91 |
| dpH             | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  | 0.54  |
| pH <sub>0</sub> | 6.47  | 6.46  | 6.45  | 6.44  | 6.43  | 6.42  | 6.42  |

**pH sensor properties**

|                     |   |
|---------------------|---|
| Dynamic range       | pH 4.60 - 8.05  |
| Resolution          | Up to 0.01 pH (software)  |
| Accuracy            | ± 0.25 pH at pH 5.10-5.40; ± 0.1 pH at pH 5.40-7.25; ± 0.25 pH at pH 7.25-7.55 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 HP8-2211-01 (at least stable for 7 days with CertiPUR-buffer)<br><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 ± 0.02, 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 = Round Well Plate (MTP-R48-BOH1)                       |
| Calibration device       | Hardware ID: BL-09-000F-0032  |
| Calibration phase offset | pH -1.40 (pH Ser. 3111, gain 7)   |
| Date of calibration      | 2024-01-12  |

**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 BioLector software!

**DO calibration parameters Lot No.2318107 (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      | 72.46 | 72.43 | 72.41 | 72.38 | 72.35 | 72.32 | 72.29 |
| φ cal100    | 43.72 | 43.51 | 43.30 | 43.09 | 42.87 | 42.66 | 42.45 |

| Temperature | 27°C  | 28°C  | 29°C  | 30°C  | 31°C  | 32°C  | 33°C  |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0      | 72.27 | 72.24 | 72.21 | 72.18 | 72.15 | 72.13 | 72.10 |
| φ cal100    | 42.24 | 42.03 | 41.81 | 41.60 | 41.39 | 41.18 | 40.97 |

| Temperature | 34°C  | 35°C  | 36°C  | 37°C  | 38°C  | 39°C  | 40°C  |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0      | 72.07 | 72.04 | 72.02 | 71.99 | 71.96 | 71.93 | 71.90 |
| φ cal100    | 40.76 | 40.54 | 40.33 | 40.12 | 39.91 | 39.70 | 39.48 |

### 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)<br><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 = Round Well Plate (MTP-R48-BOH1) |
| Calibration device       | Hardware ID: BL-09-000F-0032  |
| Calibration phase offset | DO -360.25 (DO Ser. 4103, gain 7)   |
| Date of calibration      | 2024-01-12  |

### Sterilization procedure

|                       |                           |
|-----------------------|---------------------------|
| Sterilization         | Beta irradiation (20 kGy) |
| Steris Process Run ID | 2324-4738                 |
| Date of sterilization | 2023-12-22                |

### Contact us

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