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

## pH calibration parameters Lot No.2201101 (BioLector XT Microbioreactor, filter module ID-502)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 64.29 | 64.21 | 64.14 | 64.06 | 63.99 | 63.92 | 63.84 |
| ϕ max | 13.05 | 13.05 | 13.06 | 13.07 | 13.08 | 13.09 | 13.09 |
| dpH | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| $pH_0$ | 6.21 | 6.21 | 6.20 | 6.19 | 6.18 | 6.17 | 6.16 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 63.77 | 63.70 | 63.62 | 63.55 | 63.47 | 63.40 | 63.33 |
| ϕ max | 13.10 | 13.11 | 13.12 | 13.12 | 13.13 | 13.14 | 13.15 |
| dpH | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| $pH_0$ | 6.15 | 6.14 | 6.13 | 6.12 | 6.11 | 6.10 | 6.09 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 63.25 | 63.18 | 63.10 | 63.03 | 62.96 | 62.88 | 62.81 |
| ϕ max | 13.16 | 13.16 | 13.17 | 13.18 | 13.19 | 13.19 | 13.20 |
| dpH | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| $pH_0$ | 6.08 | 6.07 | 6.06 | 6.05 | 6.04 | 6.03 | 6.02 |

### pH sensor properties

| | |
|---|---|
| Dynamic range | pH 4.20 - 7.70 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.70 - 5.00 ; ± 0.1 pH at pH 5.00 - 6.90 ; ± 0.25 pH at pH 6.90 - 7.20 (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_6 (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 Citrat-Na-Phosphate buffer (16 solutions) |
| Settings | BioLector protocol = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | pH -2.45 (pH Ser. 3511, gain 7) |
| Date of calibration | 2022-01-25 |

**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

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

**DO calibration parameters Lot No.2201101 (BioLector XT Microbioreactor, filter module ID-503)**

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| A | -4153 | -4084 | -4016 | -3947 | -3879 | -3810 | -3741 |
| B | 32705 | 32162 | 31619 | 31076 | 30533 | 29991 | 29448 |
| C | -29644 | -29149 | -28654 | -28159 | -27664 | -27169 | -26674 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| A | -3673 | -3604 | -3536 | -3467 | -3399 | -3330 | -3261 |
| B | 28905 | 28362 | 27819 | 27276 | 26733 | 26191 | 25648 |
| C | -26180 | -25685 | -25190 | -24695 | -24200 | -23705 | -23210 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| A | -3193 | -3124 | -3056 | -2987 | -2919 | -2850 | -2781 |
| B | 25105 | 24562 | 24019 | 23476 | 22933 | 22391 | 21848 |
| C | -22715 | -22220 | -21726 | -21231 | -20736 | -20241 | -19746 |

## DO sensor properties

| | |
|---|---|
| Dynamic range | 0 - 100 % oxygen |
| Resolution | Up to 0.1 % O2 (software) |
| Accuracy | ± 5% dissolved oxygen (batch calibration) |
| Drift at 0% oxygen | < 0.5% O2 per day (sampling interval of 6 min) |
| Response time (t90) | < 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 | 0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment) |
| Settings | BioLector protocol = pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | DO -360.83 (DO Ser. 4446, gain 7) |
| Date of calibration | 2022-01-25 |

## Sterilization procedure

| | |
|---|---|
| Sterilization | Beta irradiation (20 kGy) |
| BGS-certificate No | 990461 |
| Date of sterilization | 2022-01-19 |

**Contact us**

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