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

**pH calibration parameters Lot No.2309311 (BioLector XT Microbioreactor, filter module ID-524)**

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 66.56 | 66.74 | 66.92 | 67.10 | 67.28 | 67.46 | 67.65 |
| ϕ max | 13.52 | 13.55 | 13.58 | 13.61 | 13.64 | 13.67 | 13.70 |
| dpH | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 |
| $pH_0$ | 5.30 | 5.29 | 5.28 | 5.27 | 5.27 | 5.26 | 5.25 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 67.83 | 68.01 | 68.19 | 68.37 | 68.55 | 68.73 | 68.91 |
| ϕ max | 13.73 | 13.76 | 13.79 | 13.82 | 13.84 | 13.87 | 13.90 |
| dpH | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 | -0.41 |
| $pH_0$ | 5.25 | 5.24 | 5.23 | 5.22 | 5.22 | 5.21 | 5.20 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 69.09 | 69.27 | 69.45 | 69.63 | 69.81 | 69.99 | 70.17 |
| ϕ max | 13.93 | 13.96 | 13.99 | 14.02 | 14.05 | 14.08 | 14.11 |
| dpH | -0.41 | -0.41 | -0.41 | -0.41 | -0.40 | -0.40 | -0.40 |
| $pH_0$ | 5.20 | 5.19 | 5.18 | 5.17 | 5.17 | 5.16 | 5.15 |

## pH sensor properties

| | |
|---|---|
| Dynamic range | pH 3.70 - 6.50 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.05 - 4.25 ; ± 0.1 pH at pH 4.25 - 6.00 ; ± 0.25 pH at pH 6.00 - 6.20 (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 pH51-204250706 (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 2.00 ± 0.02 / pH 3.00 ± 0.02 / pH 7.00 ± 0.02 / pH 8.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions) |
| Settings | BioLector protocol = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH3) |
| Calibration device | Hardware ID: 03624969 (BLXT Pilot 7) |
| Calibration phase offset | pH -361.17 (pH Ser. 3587, gain 6) |
| Date of calibration | 2023-06-16 |

**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.2309311 (BioLector XT Microbioreactor, filter module ID-528)**

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| A | -2046 | -2003 | -1961 | -1918 | -1875 | -1833 | -1790 |
| B | 15814 | 15478 | 15141 | 14805 | 14469 | 14132 | 13796 |
| C | -14023 | -13719 | -13414 | -13109 | -12804 | -12499 | -12194 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| A | -1747 | -1704 | -1662 | -1619 | -1576 | -1533 | -1491 |
| B | 13459 | 13123 | 12787 | 12450 | 12114 | 11777 | 11441 |
| C | -11890 | -11585 | -11280 | -10975 | -10670 | -10365 | -10061 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| A | -1448 | -1405 | -1362 | -1320 | -1277 | -1234 | -1191 |
| B | 11105 | 10768 | 10432 | 10095 | 9759 | 9423 | 9086 |
| C | -9756 | -9451 | -9146 | -8841 | -8537 | -8232 | -7927 |

## 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 RF-230250056 (at least stable for 7 days with CertiPUR-buffer) |
| | **DO sensors are light-sensitive;please protect them from direct light!** |

## DO calibration

| | |
|---|---|
| Calibration | Three-point calibration at an oxygen-free environment (1.0 M sulfite system), an air-saturated environment (21% oxygen) and a pure (100%) oxygen environment (latter two with QC buffer) |
| Settings | BioLector protocol = MF_pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH3) |
| Calibration device | Hardware ID: 03624969 (BLXT Pilot 7) |
| Calibration phase offset | DO -360.66 (DO Ser. 4452, gain 4) |
| Date of calibration | 2023-06-16 |

## Sterilization procedure

| | |
|---|---|
| Sterilization | Beta irradiation (20 kGy) |
| Steris Process Run ID | 2324-3778 |
| Date of sterilization | 2023-06-12 |

**Contact us**

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