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

## pH calibration parameters Lot No.2215301+2215391 (BioLector XT Microbioreactor, filter module ID-524)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 64.86 | 64.98 | 65.11 | 65.23 | 65.35 | 65.48 | 65.60 |
| ϕ max | 11.64 | 11.67 | 11.70 | 11.72 | 11.75 | 11.78 | 11.81 |
| dpH | -0.41 | -0.41 | -0.40 | -0.40 | -0.40 | -0.40 | -0.40 |
| $pH_0$ | 5.43 | 5.43 | 5.42 | 5.42 | 5.41 | 5.41 | 5.40 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 65.72 | 65.84 | 65.97 | 66.09 | 66.21 | 66.34 | 66.46 |
| ϕ max | 11.84 | 11.87 | 11.89 | 11.92 | 11.95 | 11.98 | 12.01 |
| dpH | -0.40 | -0.40 | -0.40 | -0.40 | -0.39 | -0.39 | -0.39 |
| $pH_0$ | 5.40 | 5.39 | 5.39 | 5.38 | 5.38 | 5.37 | 5.37 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| ϕ min | 66.58 | 66.70 | 66.83 | 66.95 | 67.07 | 67.20 | 67.32 |
| ϕ max | 12.03 | 12.06 | 12.09 | 12.12 | 12.15 | 12.17 | 12.20 |
| dpH | -0.39 | -0.39 | -0.39 | -0.39 | -0.39 | -0.39 | -0.39 |
| $pH_0$ | 5.36 | 5.36 | 5.36 | 5.35 | 5.35 | 5.34 | 5.34 |

### pH sensor properties

| | |
|---|---|
| Dynamic range | pH 3.85 - 6.65 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.20 - 4.40 ; ± 0.1 pH at pH 4.40 - 6.15 ; ± 0.25 pH at pH 6.15 - 6.35 (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 pH51-211650293 (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 = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3) |
| Calibration device | Hardware ID: 03624952 (BLXT 0071) |
| Calibration phase offset | pH -360.79 (pH Ser. 4673, gain 6) |
| Date of calibration | 2022-12-12 |

**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

· 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.2215301+2215391 (BioLector XT Microbioreactor, filter module ID-528)**

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|---|---|---|---|---|---|---|---|
| A | -1778 | -1743 | -1708 | -1673 | -1639 | -1604 | -1569 |
| B | 13659 | 13386 | 13113 | 12840 | 12567 | 12294 | 12021 |
| C | -12020 | -11774 | -11528 | -11282 | -11036 | -10790 | -10544 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|---|---|---|---|---|---|---|---|
| A | -1534 | -1499 | -1464 | -1430 | -1395 | -1360 | -1325 |
| B | 11748 | 11475 | 11202 | 10929 | 10656 | 10383 | 10110 |
| C | -10298 | -10052 | -9806 | -9560 | -9314 | -9068 | -8822 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|---|---|---|---|---|---|---|---|
| A | -1290 | -1255 | -1220 | -1186 | -1151 | -1116 | -1081 |
| B | 9837 | 9564 | 9291 | 9018 | 8745 | 8472 | 8199 |
| C | -8576 | -8330 | -8084 | -7838 | -7592 | -7346 | -7100 |

## 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-222757000 (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 = pH_DO_calibration_BOH3 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH3) |
| Calibration device | Hardware ID: 03624952 (BLXT 0071) |
| Calibration phase offset | DO -360.78 (DO Ser. 4452, gain 4) |
| Date of calibration | 2022-12-12 |

## Sterilization procedure

| | |
|---|---|
| Sterilization | Beta irradiation (20 kGy) |
| Steris Process Run ID | 2324-3130 |
| Date of sterilization | 2022-12-06 |

**Contact us**

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