

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

pH calibration parameters Lot No.2307101 (BioLector XT Microbioreactor, filter module ID-502)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 63.34 | 63.28 | 63.22 | 63.16 | 63.10 | 63.04 | 62.98 |
| φ max | 15.16 | 15.18 | 15.19 | 15.20 | 15.22 | 15.23 | 15.24 |
| dpH | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| pH ₀ | 6.74 | 6.72 | 6.71 | 6.70 | 6.69 | 6.68 | 6.67 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 62.92 | 62.87 | 62.81 | 62.75 | 62.69 | 62.63 | 62.57 |
| φ max | 15.26 | 15.27 | 15.28 | 15.30 | 15.31 | 15.32 | 15.34 |
| dpH | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| pH ₀ | 6.66 | 6.65 | 6.64 | 6.63 | 6.61 | 6.60 | 6.59 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 62.51 | 62.45 | 62.39 | 62.33 | 62.27 | 62.21 | 62.15 |
| φ max | 15.35 | 15.36 | 15.38 | 15.39 | 15.40 | 15.42 | 15.43 |
| dpH | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| pH ₀ | 6.58 | 6.57 | 6.56 | 6.55 | 6.54 | 6.53 | 6.51 |

pH sensor properties

| | |
|---------------------|---|
| Dynamic range | pH 4.80 - 8.10 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 5.30 - 5.55 ; ± 0.1 pH at pH 5.55 - 7.35 ; ± 0.25 pH at pH 7.35 - 7.65 (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 HP8-2148-01_2 (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 -1.70 (pH Ser. 3567, gain 7) |
| Date of calibration | 2023-05-02 |

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 BioLector software!

DO calibration parameters Lot No.2307101 (BioLector XT Microbioreactor, filter module ID-503)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -4324 | -4250 | -4177 | -4103 | -4029 | -3956 | -3882 |
| B | 34029 | 33447 | 32865 | 32284 | 31702 | 31120 | 30539 |
| C | -30826 | -30296 | -29766 | -29236 | -28706 | -28176 | -27646 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -3809 | -3735 | -3662 | -3588 | -3515 | -3441 | -3368 |
| B | 29957 | 29375 | 28794 | 28212 | 27630 | 27048 | 26467 |
| C | -27116 | -26586 | -26056 | -25526 | -24996 | -24466 | -23936 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -3294 | -3221 | -3147 | -3074 | -3000 | -2927 | -2853 |
| B | 25885 | 25303 | 24722 | 24140 | 23558 | 22977 | 22395 |
| C | -23406 | -22876 | -22346 | -21816 | -21286 | -20756 | -20226 |

DO sensor properties

| | |
|----------------------------------|---|
| Dynamic range | 0 - 100 % oxygen |
| Resolution | Up to 0.1 % O ₂ (software) |
| Accuracy | ± 5% dissolved oxygen (batch calibration) |
| Drift at 0% oxygen | < 0.5% O ₂ per day (sampling interval of 6 min) |
| Response time (t ₉₀) | < 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) |

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_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 -360.66 (DO Ser. 4446, gain 7) |
| Date of calibration | 2023-05-02 |

Sterilization procedure

| | |
|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| Steris Process Run ID | 2324-3664 |
| Date of sterilization | 2023-04-18 |

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