

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

pH calibration parameters Lot No.2204111 (BioLector XT Microbioreactor, filter module ID-502)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 64.50 | 64.42 | 64.34 | 64.26 | 64.19 | 64.11 | 64.03 |
| φ max | 13.27 | 13.27 | 13.27 | 13.27 | 13.28 | 13.28 | 13.28 |
| dpH | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| pH ₀ | 6.28 | 6.27 | 6.26 | 6.25 | 6.24 | 6.23 | 6.22 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 63.95 | 63.88 | 63.80 | 63.72 | 63.64 | 63.56 | 63.49 |
| φ max | 13.28 | 13.28 | 13.29 | 13.29 | 13.29 | 13.29 | 13.30 |
| dpH | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| pH ₀ | 6.21 | 6.20 | 6.19 | 6.18 | 6.17 | 6.16 | 6.16 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 63.41 | 63.33 | 63.25 | 63.18 | 63.10 | 63.02 | 62.94 |
| φ max | 13.30 | 13.30 | 13.30 | 13.30 | 13.31 | 13.31 | 13.31 |
| 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 |

pH sensor properties

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|---------------------|---|
| Dynamic range | pH 4.25 - 7.80 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.75 - 5.05 ; ± 0.1 pH at pH 5.05 - 7.00 ; ± 0.25 pH at pH 7.00 - 7.30 (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

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|--------------------------|--|
| 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 = MF_pH_DO_calibration_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | pH -2.06 (pH Ser. 3567, gain 7) |
| Date of calibration | 2022-04-12 |

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

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DO calibration parameters Lot No.2204111 (BioLector XT Microbioreactor, filter module ID-528)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -4255 | -4186 | -4116 | -4046 | -3976 | -3907 | -3837 |
| B | 33536 | 32985 | 32433 | 31881 | 31329 | 30777 | 30225 |
| C | -30424 | -29921 | -29417 | -28914 | -28411 | -27908 | -27405 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -3767 | -3698 | -3628 | -3558 | -3489 | -3419 | -3349 |
| B | 29674 | 29122 | 28570 | 28018 | 27466 | 26914 | 26363 |
| C | -26901 | -26398 | -25895 | -25392 | -24889 | -24385 | -23882 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -3279 | -3210 | -3140 | -3070 | -3001 | -2931 | -2861 |
| B | 25811 | 25259 | 24707 | 24155 | 23603 | 23052 | 22500 |
| C | -23379 | -22876 | -22372 | -21869 | -21366 | -20863 | -20360 |

DO sensor properties

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|----------------------------------|---|
| 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_4 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light! |

DO calibration

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| 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_BOH1 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32C-BOH1) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | DO -360.98 (DO Ser. 4446, gain 7) |
| Date of calibration | 2022-04-12 |

Sterilization procedure

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|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| BGS-certificate No | 1020859 |
| Date of sterilization | 2022-04-01 |

Contact us

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