

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

pH calibration parameters Lot No.2116207 (BioLector XT Microbioreactor, filter module ID-521)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 70.41 | 70.34 | 70.27 | 70.21 | 70.14 | 70.08 | 70.01 |
| φ max | 12.24 | 12.17 | 12.10 | 12.04 | 11.97 | 11.90 | 11.84 |
| d pH | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.82 | 0.82 |
| pH ₀ | 6.53 | 6.52 | 6.50 | 6.49 | 6.48 | 6.47 | 6.46 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 69.94 | 69.88 | 69.81 | 69.74 | 69.68 | 69.61 | 69.55 |
| φ max | 11.77 | 11.70 | 11.64 | 11.57 | 11.50 | 11.44 | 11.37 |
| d pH | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| pH ₀ | 6.45 | 6.44 | 6.43 | 6.42 | 6.41 | 6.40 | 6.39 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 69.48 | 69.41 | 69.35 | 69.28 | 69.21 | 69.15 | 69.08 |
| φ max | 11.30 | 11.24 | 11.17 | 11.11 | 11.04 | 10.97 | 10.91 |
| d pH | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| pH ₀ | 6.37 | 6.36 | 6.35 | 6.34 | 6.33 | 6.32 | 6.31 |

pH sensor properties

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|----------------------------------|---|
| Dynamic range | pH 3.75 - 8.75 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.55 - 5.05 ; ± 0.1 pH at pH 5.05 - 7.50 ; ± 0.25 pH at pH 7.50 - 8.00 (batch calibration) |
| Response time (t ₉₀) | 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 LG1-1939-01_2 (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 2.00 ± 0.02 / pH 3.00 ± 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_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Well Plate (MTP-R48-BOH2) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | pH -360.45 (pH Ser. 3513, gain 8) |
| Date of calibration | 2021-12-09 |

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.2116207 (BioLector XT Microbioreactor, filter module ID-528)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| A | -1725 | -1693 | -1661 | -1628 | -1596 | -1564 | -1531 |
| B | 13254 | 13001 | 12748 | 12494 | 12241 | 11988 | 11735 |
| C | -11664 | -11436 | -11208 | -10980 | -10752 | -10524 | -10296 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-------------|--------|-------|-------|-------|-------|-------|-------|
| A | -1499 | -1467 | -1434 | -1402 | -1370 | -1337 | -1305 |
| B | 11482 | 11229 | 10976 | 10722 | 10469 | 10216 | 9963 |
| C | -10068 | -9840 | -9612 | -9384 | -9156 | -8928 | -8700 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| A | -1273 | -1240 | -1208 | -1176 | -1143 | -1111 | -1079 |
| B | 9710 | 9457 | 9203 | 8950 | 8697 | 8444 | 8191 |
| C | -8472 | -8244 | -8016 | -7788 | -7560 | -7332 | -7104 |

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 RF- 213550639 (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 | 0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment) |
| Settings | BioLector protocol = pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Round Well Plate (MTP-R48-BOH2) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | DO -360.67 (DO Ser. 4452, gain 4) |
| Date of calibration | 2021-12-09 |

Sterilization procedure

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|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| BGS-certificate No | 972085 |
| Date of sterilization | 2021-11-25 |

Contact us

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