

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

pH calibration parameters Lot No. 2014211 (BioLector® Pro, filter module ID-221/-421)

| | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
| φ min | 69.15 | 69.07 | 68.98 | 68.90 | 68.82 | 68.74 | 68.65 |
| φ max | 13.77 | 13.73 | 13.68 | 13.64 | 13.60 | 13.56 | 13.51 |
| dpH | 0.82 | 0.82 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| pH ₀ | 6.59 | 6.58 | 6.57 | 6.56 | 6.55 | 6.53 | 6.52 |
| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
| φ min | 68.57 | 68.49 | 68.41 | 68.33 | 68.24 | 68.16 | 68.08 |
| φ max | 13.47 | 13.43 | 13.39 | 13.34 | 13.30 | 13.26 | 13.22 |
| dpH | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.79 | 0.79 |
| pH ₀ | 6.51 | 6.50 | 6.49 | 6.48 | 6.47 | 6.46 | 6.44 |
| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
| φ min | 68.00 | 67.92 | 67.83 | 67.75 | 67.67 | 67.59 | 67.51 |
| φ max | 13.17 | 13.13 | 13.09 | 13.05 | 13.00 | 12.96 | 12.92 |
| dpH | 0.79 | 0.79 | 0.79 | 0.78 | 0.78 | 0.78 | 0.78 |
| pH ₀ | 6.43 | 6.42 | 6.41 | 6.40 | 6.39 | 6.38 | 6.36 |

pH sensor properties

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|---------------------|---|
| Dynamic range | pH 3.85-8.45 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.65-5.2; ± 0.1 pH at pH 5.2-7.25 ± 0.25 pH at pH 7.25-7.75 (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 -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 ± 0.01 / pH 3.00 ± 0.015 / pH 9.00 ± 0.01 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions) |
| Settings | BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2) |
| Calibration device | Hardware ID: BL-09-000F-0032 |
| Calibration phase offset | pH-360.14 (pH Ser.3305, gain 8) |
| Date of calibration | 2021/01/25 |

HEADQUARTERS EUROPE

m2p-labs GmbH Phone +49 - 2401 805 330
 Arnold-Sommerfeld-Ring 2 Fax +49 - 2401 805 33
 52499 Baesweiler, Germany info@m2p-labs.com

SUPPORT

EUROPE
 Phone +49 - 2401 805 335
 support@m2p-labs.com

AMERICA
 Phone +1 631 501 1878
 supportUS@m2p-labs.com

ASIA PACIFIC
 Phone +852 6092 6778
 supportAsia@m2p-labs.com

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

DO calibration parameters Lot No. 2014211 (BioLector® Pro, filter module ID-228/-428)

| | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
| φ cal0 | 69.13 | 69.12 | 69.10 | 69.08 | 69.07 | 69.05 | 69.04 |
| φ cal100 | 41.56 | 41.37 | 41.17 | 40.98 | 40.79 | 40.60 | 40.41 |
| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
| φ cal0 | 69.02 | 69.00 | 68.99 | 68.97 | 68.96 | 68.94 | 68.92 |
| φ cal100 | 40.22 | 40.02 | 39.83 | 39.64 | 39.45 | 39.26 | 39.07 |
| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
| φ cal0 | 68.91 | 68.89 | 68.88 | 68.86 | 68.84 | 68.83 | 68.81 |
| φ cal100 | 38.87 | 38.68 | 38.49 | 38.30 | 38.11 | 37.92 | 37.73 |

DO sensor properties

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|----------------------------------|---|
| Dynamic range | 0 - 100 % air saturation (a.s.) |
| 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 m2p-A204150648 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light! |

DO calibration

| | |
|--------------------------|---|
| Calibration | 0.5 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment) |
| Settings | BioLector protocol = LG1-RF-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Flower Plate (MTP-MF32-BOH2) |
| Calibration device | Hardware ID: BL-09-000F-0032 |
| Calibration phase offset | DO -360.44 (DO Ser.4302-RD, gain 4) |
| Date of calibration | 2021/01/25 |

Sterilization procedure

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|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| BGS-certificate No | 845636 |
| Date of sterilization | 2021/01/11 |

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m2p-labs GmbH Phone +49 - 2401 805 330
 Arnold-Sommerfeld-Ring 2 Fax +49 - 2401 805 33
 52499 Baesweiler, Germany info@m2p-labs.com

SUPPORT

EUROPE
 Phone +49 - 2401 805 335
 support@m2p-labs.com

AMERICA
 Phone +1 631 501 1878
 supportUS@m2p-labs.com

ASIA PACIFIC
 Phone +852 6092 6778
 supportAsia@m2p-labs.com