

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

pH calibration parameters Lot No.2117221 and 2117227 (BioLector II/Pro Microbioreactor, filter module ID-221/421)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 71.82 | 71.74 | 71.65 | 71.56 | 71.48 | 71.39 | 71.30 |
| φ max | 23.11 | 23.05 | 23.00 | 22.94 | 22.89 | 22.83 | 22.77 |
| dpH | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| pH ₀ | 6.01 | 6.00 | 5.99 | 5.97 | 5.96 | 5.95 | 5.94 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 71.22 | 71.13 | 71.04 | 70.96 | 70.87 | 70.78 | 70.70 |
| φ max | 22.72 | 22.66 | 22.60 | 22.55 | 22.49 | 22.44 | 22.38 |
| dpH | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| pH ₀ | 5.92 | 5.91 | 5.90 | 5.89 | 5.87 | 5.86 | 5.85 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 70.61 | 70.52 | 70.44 | 70.35 | 70.26 | 70.18 | 70.09 |
| φ max | 22.32 | 22.27 | 22.21 | 22.15 | 22.10 | 22.04 | 21.99 |
| dpH | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| pH ₀ | 5.84 | 5.82 | 5.81 | 5.80 | 5.79 | 5.77 | 5.76 |

pH sensor properties

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|---------------------|---|
| Dynamic range | pH 3.60 - 7.90 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 4.30 - 4.75 ; ± 0.1 pH at pH 4.75 - 6.70 ; ± 0.25 pH at pH 6.70 - 7.20 (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 LG1-2141-01 (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 = MF_pH_DO_calibration_BOH2 , T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH2) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | pH -360.68 (pH Ser. 3513, gain 8) |
| Date of calibration | 2022-01-05 |

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.2117221 and 2117227 (BioLector II/Pro Microbioreactor, filter module ID-228/428)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 69.84 | 69.82 | 69.80 | 69.79 | 69.77 | 69.75 | 69.74 |
| φ cal100 | 41.45 | 41.24 | 41.03 | 40.81 | 40.60 | 40.39 | 40.17 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 69.72 | 69.70 | 69.69 | 69.67 | 69.65 | 69.64 | 69.62 |
| φ cal100 | 39.96 | 39.75 | 39.53 | 39.32 | 39.11 | 38.89 | 38.68 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 69.60 | 69.59 | 69.57 | 69.55 | 69.54 | 69.52 | 69.50 |
| φ cal100 | 38.47 | 38.25 | 38.04 | 37.83 | 37.61 | 37.40 | 37.19 |

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-213550640 (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 = MF_pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Microfluidic Round Well Plate (MTP-RMF32C-BOH2) |
| Calibration device | Hardware ID: 03166164 (BLXT Pilot 1) |
| Calibration phase offset | DO -360.82 (DO Ser. 4452, gain 4) |
| Date of calibration | 2022-01-05 |

Sterilization procedure

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|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| BGS-certificate No | 979401 |
| Date of sterilization | 2021-12-14 |

Contact us

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