

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

pH calibration parameters Lot No.2214101 (BioLector I Microbioreactor, filter module ID-102/-302)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 55.31 | 55.26 | 55.21 | 55.16 | 55.11 | 55.06 | 55.01 |
| φ max | 12.45 | 12.47 | 12.48 | 12.50 | 12.51 | 12.52 | 12.54 |
| dpH | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| pH ₀ | 6.68 | 6.67 | 6.66 | 6.65 | 6.64 | 6.63 | 6.62 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 54.96 | 54.91 | 54.86 | 54.81 | 54.76 | 54.71 | 54.66 |
| φ max | 12.55 | 12.57 | 12.58 | 12.60 | 12.61 | 12.63 | 12.64 |
| dpH | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| pH ₀ | 6.61 | 6.61 | 6.60 | 6.59 | 6.58 | 6.57 | 6.56 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| φ min | 54.61 | 54.56 | 54.51 | 54.46 | 54.41 | 54.36 | 54.31 |
| φ max | 12.66 | 12.67 | 12.69 | 12.70 | 12.72 | 12.73 | 12.75 |
| dpH | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| pH ₀ | 6.55 | 6.54 | 6.53 | 6.52 | 6.51 | 6.50 | 6.50 |

pH sensor properties

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|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dynamic range | pH 4.85 - 7.95 |
| Resolution | Up to 0.01 pH (software) |
| Accuracy | ± 0.25 pH at pH 5.30-5.60; ± 0.1 pH at pH 5.60-7.20; ± 0.25 pH at pH 7.20-7.50 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 HP8-2148-01 (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 3.00 ± 0.02 / pH 4.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Na-Phosphate buffer (16 solutions) |
| Settings | BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1) |
| Calibration device | Hardware ID: BL092-CX-4A7394 |
| Calibration phase offset | pH 255.90 (pH Ser. 3403, gain 55) |
| Date of calibration | 2022-12-07 |

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.2214101 (BioLector I Microbioreactor, filter module ID-103/-303)

| Temperature | 20°C | 21°C | 22°C | 23°C | 24°C | 25°C | 26°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 73.61 | 73.53 | 73.45 | 73.37 | 73.29 | 73.21 | 73.14 |
| φ cal100 | 44.43 | 44.19 | 43.95 | 43.70 | 43.46 | 43.22 | 42.97 |

| Temperature | 27°C | 28°C | 29°C | 30°C | 31°C | 32°C | 33°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 73.06 | 72.98 | 72.90 | 72.82 | 72.74 | 72.66 | 72.59 |
| φ cal100 | 42.73 | 42.49 | 42.25 | 42.00 | 41.76 | 41.52 | 41.27 |

| Temperature | 34°C | 35°C | 36°C | 37°C | 38°C | 39°C | 40°C |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| φ cal0 | 72.51 | 72.43 | 72.35 | 72.27 | 72.19 | 72.11 | 72.04 |
| φ cal100 | 41.03 | 40.79 | 40.55 | 40.30 | 40.06 | 39.82 | 39.58 |

DO sensor properties

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|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dynamic range | 0 - 100 % air saturation (a.s.) |
| Resolution | Up to 0.5 % 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

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|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Calibration | 1.0 M Sulfite system (Two-point calibration with oxygen-free environment (sodium sulfite) and air-saturated environment) |
| Settings | BioLector protocol = pH-DO-calibration, T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH1) |
| Calibration device | Hardware ID: BL092-CX-4A7394 |
| Calibration phase offset | DO 332.50 (DO Ser. 3402, gain 70) |
| Date of calibration | 2022-12-07 |

Sterilization procedure

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|-----------------------|---------------------------|
| Sterilization | Beta irradiation (20 kGy) |
| Steris Process Run ID | 2324-3042 |
| Date of sterilization | 2022-11-14 |

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