Data Sheet

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# Agilent BioTek BioSpa 8 Automated Incubator

**Figure 1.** Agilent BioTek BioSpa 8 automated incubator.

**Figure 2.** Agilent BioTek BioSpa 8 automated incubator holds up to eight microplates and other labware.

**Figure 3.** Agilent BioTek BioSpa 8 automated incubator **integrates with Agilent BioTek microplate washers, dispensers, imagers, and readers for a fully automated assay workstation.**

## Product description

The Agilent BioTek BioSpa 8 is an automated incubator that links Agilent BioTek readers or imagers together with Agilent BioTek washers and dispensers for full workflow automation of up to eight microplates. Real-time control and continuous temperature, $CO_2/O_2$, and humidity level monitoring, along with lid handling ensure an ideal environment for cell cultures during all experiment stages, with minimal manual intervention. Link one washer or dispenser, one plate reader or imager, or one of each for start-to-finish workflow automation.

BioSpa 8 automates assay workflows by repeated manipulation and storage of microplates containing live cells or temperature-sensitive reagents. The instrument is ideal for efficient automation of short- or long-term cell-based assays and other temperature-, gas-, and humidity-sensitive processes. The software's session timelines and environmental reports allow quick scrutiny of the process and system status. OnDemand mode also allows multi-user, multi-experiment processing, with labware addition and removal at any time during the process. The BioSpa software features customizable text or email notifications and alerts, eliminating the need for onsite monitoring.

## Features

- Unattended workflow automation integrating sample preparation with detection/imaging for up to eight microplates.
- Real-time temperature and $CO_2/O_2$ control, with humidity monitoring.
- Continuous recording of environment conditions and customized notifications provide detailed assay monitoring and analysis.
- Combined BioSpa system, including liquid handling and detection, fits easily in biosafety cabinet, providing the sterile processing.
- Uncomplicated software and simple integration for rapid implementation with a short learning curve.
- OnDemand mode allows for multi-user flexibility and on-the-fly labware addition/removal.

## Typical applications

- Automated live cell assays (liquid handling and/or imaging)
- ELISA automation (wash, dispense, read), all steps except for initial sample dispensing
- Automated kinetic measurements on multiple microplates in parallel
- Automate processes that run over hours, days or weeks

## Configurations

- BIOSPA: Automated incubator with eight-microplate capacity, incubation to 45 °C, with control and monitoring. Includes BioSpa software and one alignment kit.
- BIOSPAG: Automated incubator with eight-microplate capacity, incubation to 45 °C, and $CO_2/O_2$ control and monitoring, water pan, and humidity monitoring. Includes BioSpa software and one alignment kit.

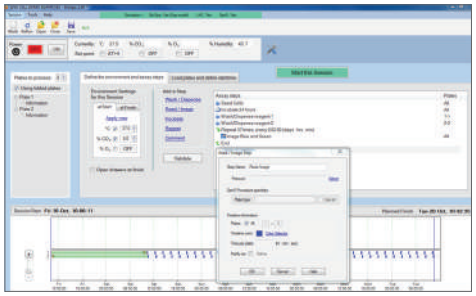

**Figure 4.** Defining assay steps in the Agilent BioTek BioSpa software.

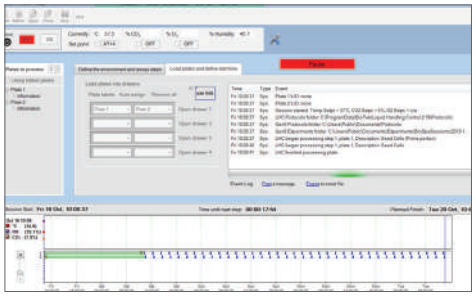

**Figure 5.** Plate assignment, session details, and timeline.

## Technical details

| General | |
|---|---|
| **Microplate Types** | 6- to 1536-well standard height microplates, with or without lids.<br>Plate height range: 7.6 to 25.4 mm |
| **Other Labware Supported** | Cell culture dishes (60 and 35 mm) |
| **Lidded Plate Handling** | Robotic arm moves plate to and from BioSpa 8 and connected instrument; handles de-lidding and re-lidding plates. |
| **Microplate Capacity** | Up to eight microplates (or other labware) |
| **Air Filter** | User-replaceable HEPA filter |
| **Compatible Instruments** | Agilent BioTek Cytation C10 confocal imaging reader (confocal and widefield)<br>Agilent BioTek Cytation 7, 5, and 1 cell imaging multimode readers<br>Agilent BioTek Synergy Neo2 hybrid multimode reader<br>Agilent BioTek Synergy H1 multimode reader<br>Agilent BioTek Epoch 2 microplate spectrophotometer<br>Agilent BioTek EL406 washer dispenser<br>Agilent BioTek 405 TS and 405 LS washers<br>Agilent BioTek MultiFlo FX multimode dispenser |
| **Interfacing Capacity** | One or two devices: reader/imager only, washer/dispenser only, or both |
| **Software** | BioSpa automated incubator software:<br>– Provides programming interface for Agilent BioTek detection and liquid handling devices.<br>– Allows user notification (text or email) of events and/or errors in the system.<br>– Provides control, monitoring and logging of:<br>  – $CO_2/O_2$<br>  – Incubator temperature<br>– Provides humidity level monitoring and logging.<br>– Allows long-term uninterrupted runs. |
| $CO_2$ and $O_2$ Control (Option) | Range: 0–20% ($CO_2$); 1–19% ($O_2$)<br>Control resolution: ± 0.1% ($CO_2$ and $O_2$)<br>Stability: ± 0.2% at 5% $CO_2$; ± 0.2% at 1% $O_2$ |
| Temperature Control | Range: to 45 °C<br>Control resolution: 0.1 °C<br>Uniformity: ± 0.5 °C at 37 °C |
| Humidity (Option) | rH: 80 to 95% (lidded plates and 5% $CO_2$)<br>Source: removable water pan<br>Water level sensor: low water level alert |
| Recommended Computer System Requirements | – Intel Pentium P4 processor or compatible/ 1.33 GHz<br>– Microsoft Windows 7, Windows 8.1, or Windows 10 Professional editions<br>– 2 GB of RAM<br>– Designed for XGA resolution 1080 x 860<br>– 10 GB of available hard drive space<br>– Keyboard and mouse; USB ports<br>– Microsoft Internet Explorer v 9.0 or higher (for online Help)<br>– Agilent BioTek Liquid Handling Control (LHC) v 2.19 or higher for washer or dispenser integration<br>– Agilent BioTek Gen5 microplate reader and imager software v 2.09 or higher for reader or imager integration |
| **Physical characteristics** | |
| **Weight** | < 85 lb (39 kg) (without shipping components and an empty water pan) |
| **Dimensions** | With standard base pan extension: 29.5" L x 22" W x 19"H (75 x 55 x 48 cm)<br>With fluidics base pan extension: 39" L x 22" W x 19" H (99 x 55 x 48 cm) |

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