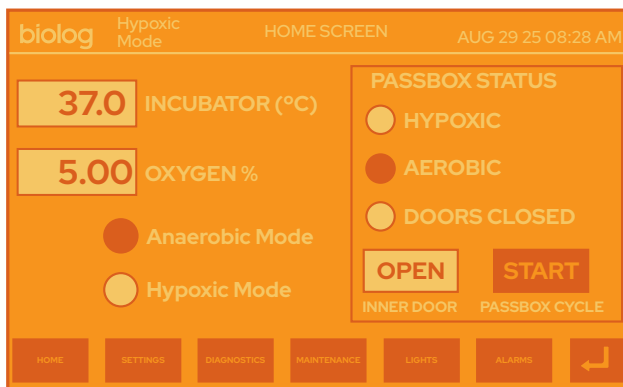


Hypoxia Option Enables Precise Oxygen Control

The AS-500 chamber with the Hypoxia Option can precisely control oxygen, creating the ideal hypoxic environment for microaerophiles, or it can maintain fully anaerobic conditions for obligate and facultative anaerobes. The Hypoxia Option can be configured ready-to-use for a new chamber or as a field upgrade to any AS-500 anaerobic chamber.



The Hypoxia Option enables easy transitions to and from anaerobic and hypoxic atmospheric conditions at the push of a button without the hassle of changing gas tanks. With expansion modules that can be added at any time to accommodate lab equipment and additional operators, and the ability to precisely control oxygen levels, the AS-500 chamber is the most flexible chamber available that can grow and adapt with your needs.

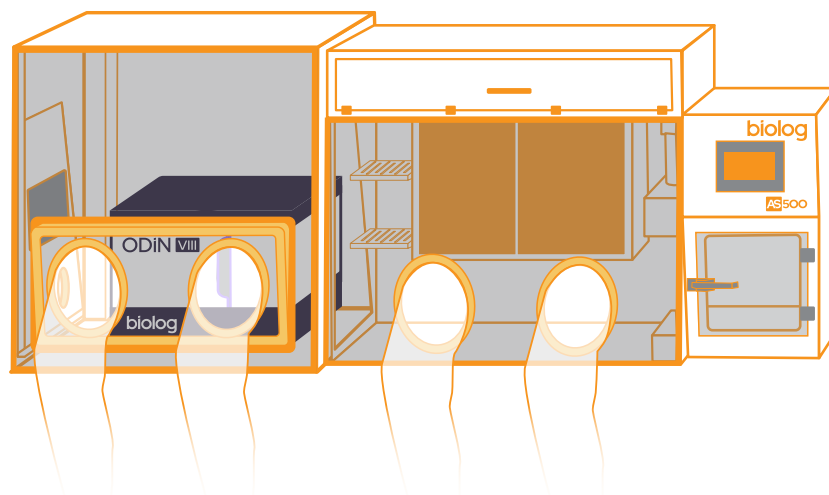
Key Features of AS-500 with Hypoxia Option:

- Buy what you need now, upgrade with additional modules or options when you're ready
- Switch from anaerobic conditions to hypoxic conditions with a click of a button on the large LCD touchscreen
- O₂ levels can be controlled between 0.1 – 10% (+/- 0.1%) O₂ using the same tri-mix gas used for fully anaerobic conditions
- Best-in-class chamber with ergonomic design for efficient and comfortable work

Learn more



Critical samples require the right atmosphere



Campylobacter jejuni is the most common source of bacterial gastroenteritis in the form of campylobacteriosis. *C. jejuni* requires low levels of oxygen (typically 5%) to grow, which helps it flourish in hypoxic conditions present in animal tissue and common food packaging. This makes it a significant concern for food safety testing and a target for drug development. Using the AS-500 equipped with the Hypoxia Option and an Instrument Module coupled with Odin™ VIII and Phenotype MicroArray™ plates, microaerophiles like *C. jejuni* can be effectively cultured and characterized under their ideal conditions.

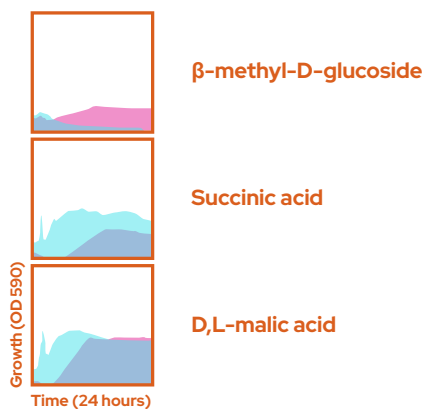


Figure 1: Carbon source preferences change with oxygen levels *C. jejuni* grown at 5% O₂ (pink) shows better overall growth than at 10% O₂ (cyan) in minimal media with β -methyl-D-glucoside as the sole source of carbon. Conversely, the sample grown at 10% O₂ grew faster on succinic acid and D,L-malic acid.

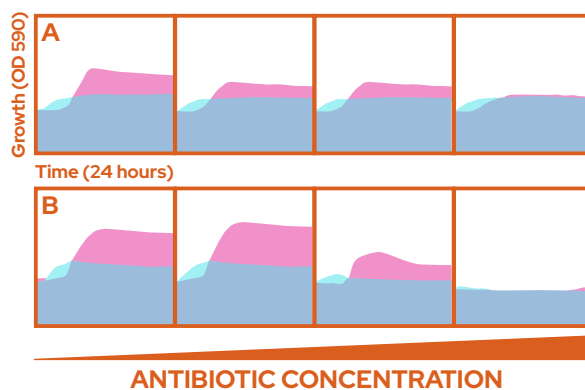


Figure 2: Drug resistance decreases with increased oxygen levels *C. jejuni* grown at 5% O₂ (pink) shows significantly better overall growth than at 10% O₂ (cyan) in rich media at low concentrations of either carbenicillin (A) or D,L-serine hydroxamate (B) while the sample grown at 10% O₂ shows an overall increase in sensitivity to both compounds at all concentrations.

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Biolog has the tools, services, and support to provide comprehensive cellular characterization and multi-omic identification for thousands of bacteria, yeast, and fungal species. Our products enable the growth and phenotypic profiling of microbial and mammalian cells for a wide range of applications, including pre-reduced media and gloveless chambers that support culturing organisms under strictly anaerobic conditions.

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