

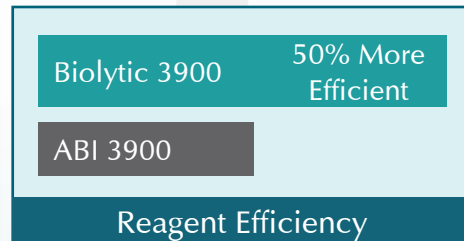
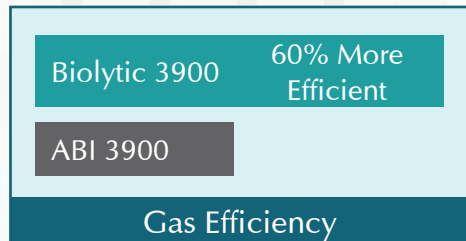
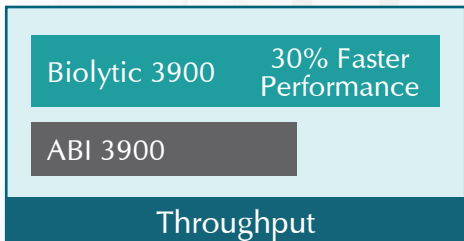
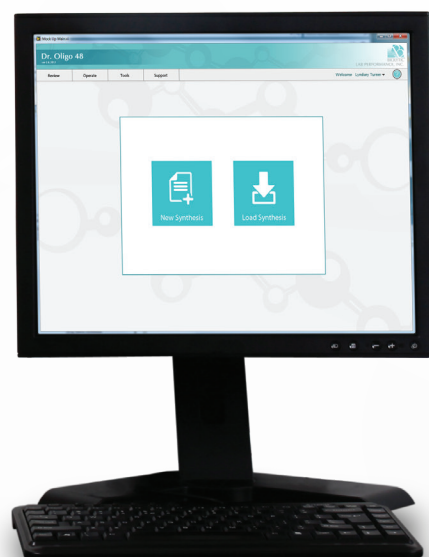
# BIOLYTIC 3900

Medium Throughput Oligo Synthesizer



Biolytic 3900



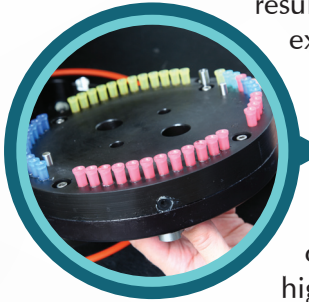


Starting life as an ABI 3900, the Biolytic 3900 is a complete overhaul of the original ABI 3900 that comes packed with new hardware and reimagined software features as well as a new computer and monitor running the latest Windows operating system. The new software is built for Windows 8 and features flexible protocol construction similar to the world renowned Dr. Oligo Synthesizer. The software supports truly independent protocol operation on each bank of 12 oligos while providing the user with real-time feedback during each synthesis run.

## FEATURES

- **Increased Performance (Faster Than Original)** The patent pending Biolytic 3900 greatly reduces cycle time due to the use of 4 drain stations rather than the original 2. The chamber volume is much lower, requiring less time to pressurize and vent.

- **Fine control of reagent flow rate through columns to minimize reagent consumption.** The original ABI system allowed only a fast flow rate to move reagents through columns to fully ensure a complete reaction resulting in an excess waste of expensive reagents. The Biolytic 3900 adds a mechanism to move reagents slowly through the columns creating maximum reaction site efficiency. This allows the use of less reagent while achieving a high reaction efficiency.



- **Lower gas consumption due to lower chamber volume.** The chamber volume has been reduced 30% from the original design, lowering gas consumption and speeding up pressurization and venting times.

- **Efficient diffusion of reagents at reaction site.** Most oligos are synthesized using CPG or polystyrene support columns. The reaction sites within the solid supports are in tight spaces (such as CPG pores), requiring time for reagent to diffuse to the reaction sites. The ability to precisely control reagent flow through the columns allows more efficient diffusion to reaction sites, resulting in higher reaction efficiency even with the use of smaller volumes of reagents.



- **Completely eliminates reverse flow cross contamination.** The patent pending Biolytic 3900 allows finely tuned control of reaction chamber pressure above and below synthesis columns, preventing liquid from flowing backwards up through columns and eliminating the risk that backflowing reagents may contaminate adjacent syntheses.



- **Chamber Flood Damage Control System** redirects chamber flood reagents to waste. In the unlikely event of a reagent overflow, excess liquid in the reaction chamber is directed to a waste trough away from the motion control assembly. This protects the motion control assembly from chemical damage, preventing the need for potentially costly and time-consuming repairs.

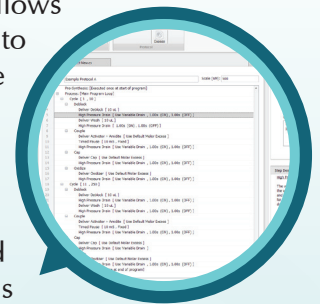


- **Truly independent protocol operation on each bank of 12 oligos.** The pressure below each bank of 12 synthesis columns is controlled independently, allowing the simultaneous use of up to 4 different protocols in a single synthesis.

- **Allows use of up to 10 specials.** The amidite delivery is highly customizable, allowing any amidite nozzle to dispense to any column position, permitting the use of up to 10 special amidites in addition to the 4 standard amidites used.

- **Ability to simultaneously use 2 different Oxidizer reagents.** The software package allows the use of more than one oxidizer, and permits the configuration of each amidite to automatically select the correct oxidizer to be used in each step of the synthesis. Among other applications, this allows oxidation and sulfurization to be performed in the same synthesis.

- **Flexible protocol construction.** There is no need to use Excel to edit and create protocols. Biolytic's protocol editor uses familiar Drag-and-Drop to edit and create protocols. Select from a range of standard protocols supplied with the software, or finely tune your protocols to meet your individual synthesis needs.





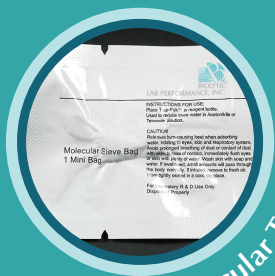
## RELATED PARTS



Valve Assembly



Column O-Rings



Molecular Traps



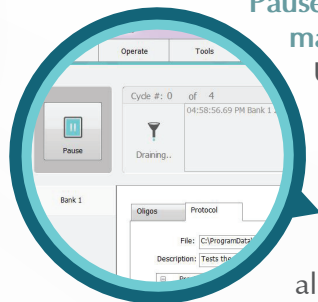
Column Removal Tool



Column Frit Tools Kit



## FEATURES CONTINUED

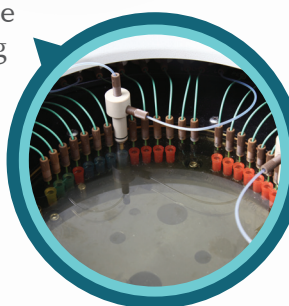


### Pause and perform manual operations:

Unlike the original ABI 3900 software, Biolytic's Dr. Oligo control software will allow the user to pause the synthesis, perform manual operations and resume the synthesis without issue.

### Intelligent Auto Prime:

Set each dispense nozzle to automatically prime during synthesis if it has not been used for X # of cycles and if it is going to be used on the current cycle. Define the volume of reagent to be dispensed during auto prime for each nozzle. This saves reagent especially expensive special reagents.



**Chemistry can change as the Oligo gets longer:** The chemistry steps in the protocol can be defined to change for different cycles within the sequence. As the oligos get longer the kinetics of the reactions change. You can compensate for these changes due to length.

### Dispense Wash to Done Wells:

To maintain even pressure throughout the synthesis for draining reagent through the columns you can select to dispense some volume of wash to the done wells or you can elect to automatically adjust the drain times to compensate for done wells.

### Select the type of support:

Standard Support which means the first base is attached to the support or Universal Support which means that the first base is not attached to the support.

### Import Synthesis Files:

Import a single file that you created with a LIMS system to setup a synthesis.



Biolytic® Lab Performance, Inc. designs, manufactures and sells the most advanced oligo synthesizers in the world. While maintaining an unsurpassed focus on delivering worldwide first class customer service, Biolytic is constantly rising to new heights. We continue to provide superior quality, innovative products and esteemed services that push the limits of research and technology.

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Patent Pending, Designs and Manufactured in the U.S.A.

