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**You are here:** [DNA RNA Oligo Synthesizer - Dr. Oligo](#)

Wednesday, 02 Jan 2019



**Dr. Oligo™**  
DNA / RNA / OLIGO SYNTHESIZERS



### High Quality

DNA / RNA / Oligo Synthesis

Designed to solve the unique issues related to synthesizing variable length oligos in high throughput.



### Automated

Synthesis & Downstream Processing

- ☒ Synthesize
- ☒ Cleave
- ☒ Deprotect\*
- ☒ Desalt
- ☒ Elute

1 to 768  
Oligos  
Synthesized  
in One Run



### Media Flexibility

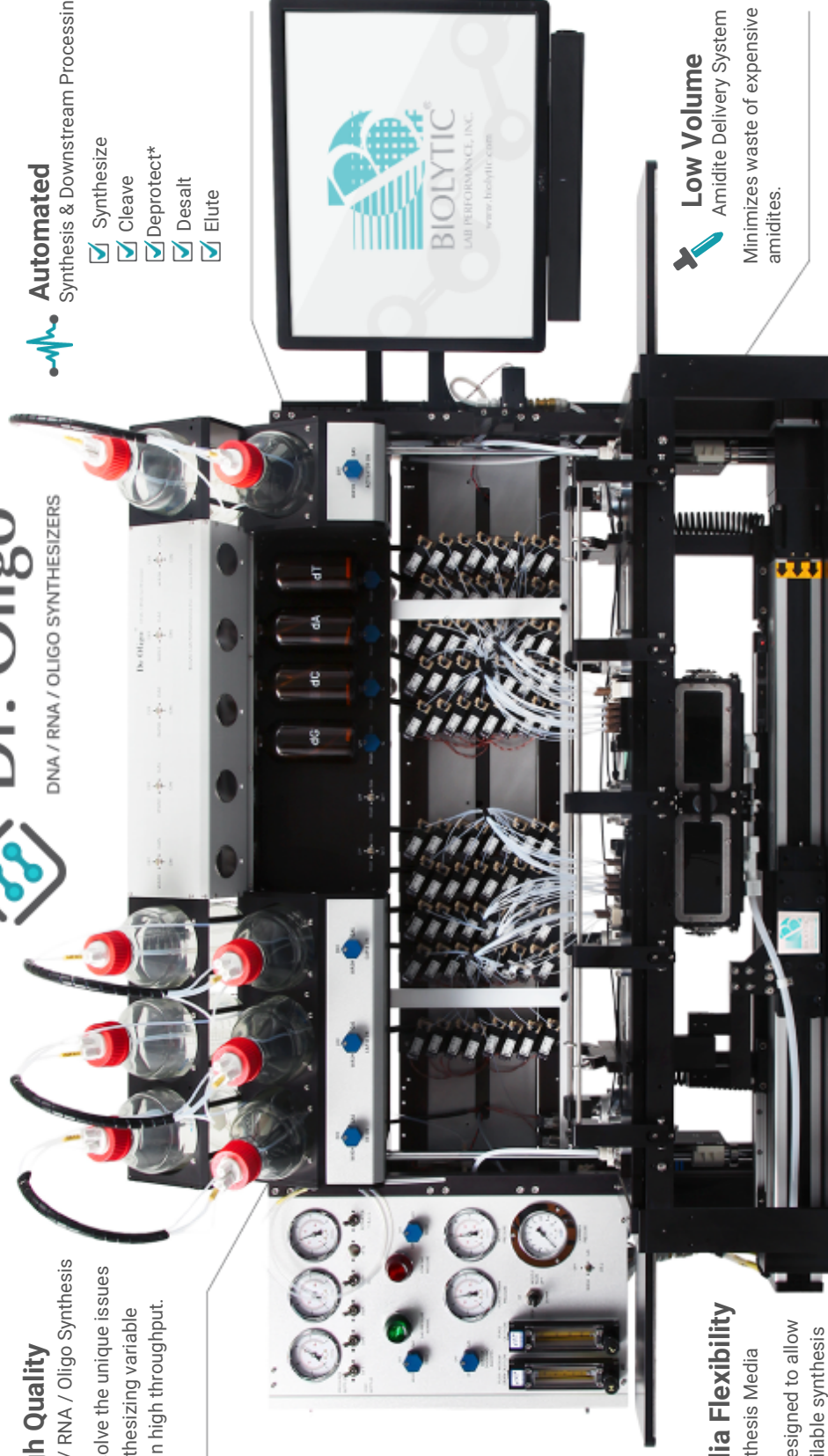
All Synthesis Media

Specifically designed to allow use of all available synthesis



### Low Volume

Amidite Delivery System  
Minimizes waste of expensive amidites.



media systems.

2x

### Reagent Dispensing

Reduces Overall Synthesis by 35%



### Scalability

Auto Reagent Delivery

The software automatically adjusts reagent delivery according to the scale of the synthesis.



### Ultimate Efficiency

Low Reagent & Gas Consumption

- Three Pressure Levels
- Two Bottles Per Reagent
- Compact Gas Chamber
- Fine Tune Reagent Flow
- Changing Bottles Without Repriming Lines
- Up to an 80% Reduction in Gas Consumption



### Upgradeable

Hardware & Software

Open frame design allows for any existing or future upgrades.



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Biolytic's Dr. Oligo - DNA synthesizer delivers the world's fastest and most efficient\* high quality oligonucleotide / dna synthesis in high throughput, medium throughput and custom configurations as well as establishing a cost effective solution flexible enough for cleavage, de-protection\*\*, de-salting and elution.

Designed and built from the ground up to address the most demanding needs of the end user. The Dr. Oligo - DNA synthesizer boasts a total of 23 amidite delivery systems with up to 19 capable of low volume while remaining easy to operate and maintain. The unique open frame design permits for a wide range of customization options from additional bottles per reagent to double reagent dispensing. All existing and future upgrades can be equipped without having to purchase a brand new instrument and most upgrades can be installed on-site keeping the instrument running with minimum downtime.

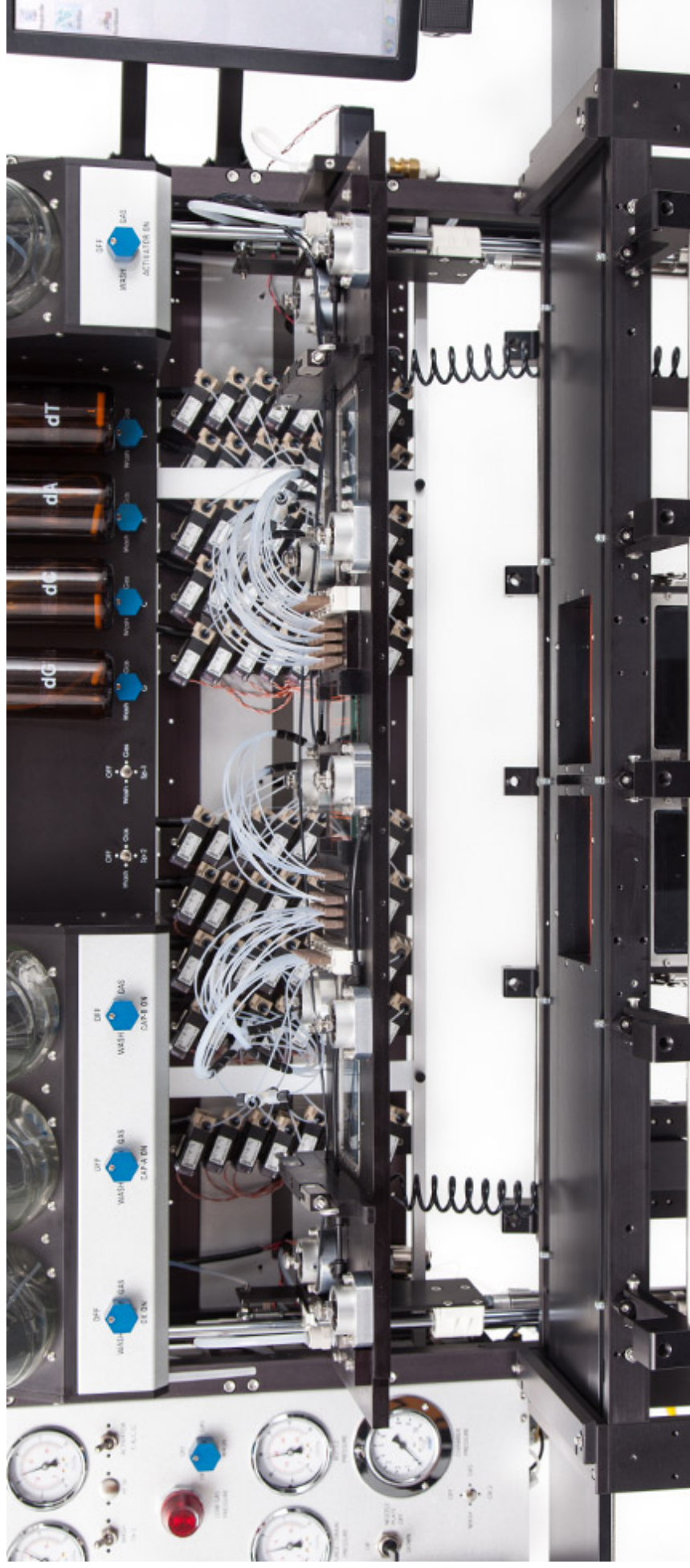
Featuring a unique parallel dispensing technology, 192 oligos can be synthesized as 20 mers in as low as 2 hours\*\*\*. Synthesis performance is vastly improved by allowing reagent delivery to up to 8 columns at a time. Quality is maintained by working in unison with an anti-drip mechanism to eliminate any chance of contamination.



**Control Panel**

*Dr. Oligo 192*

For any synthesis cycle involving over 192 oligos the overall synthesis time can be further cut by up to 35% when utilizing the double reagent dispensing option. This increases reagent delivery to up to 16 columns simultaneously providing the flexibility to achieve a single run of 768 oligos in under 4 hours\*\*\*\*. To reduce the time spent cleaning between runs a semi-automated nozzle wash and purge system automatically prepares the instrument for the next use. This system is also available as a fully automated option which eliminates any user intervention.



" Used by all of the world's leading gene synthesis companies for synthesis of their most demanding high purity long oligos. "



Ultra efficient in reagent and gas consumption, the Dr. Oligo keeps operating costs down without sacrificing on the synthesis quality. A smaller gas chamber maintains up to an 80%\*\*\*\*\* reduction in gas spent while also taking considerably less time to pressurize. An additional bottle per reagent can be added to allow one bottle to run completely empty before being changed without having to re-prime the lines. Reagent flow rate through the synthesis media (columns) can be fine tuned with up to three different pressure settings minimizing reagent consumption to achieve optimal synthesis. The optional low volume delivery system minimizes waste of expensive amidites by placing the valves and bottles on the nozzle plate thereby reducing the tubing for priming and delivery.



**Nozzle Plate**

*Dr. Oligo 192*

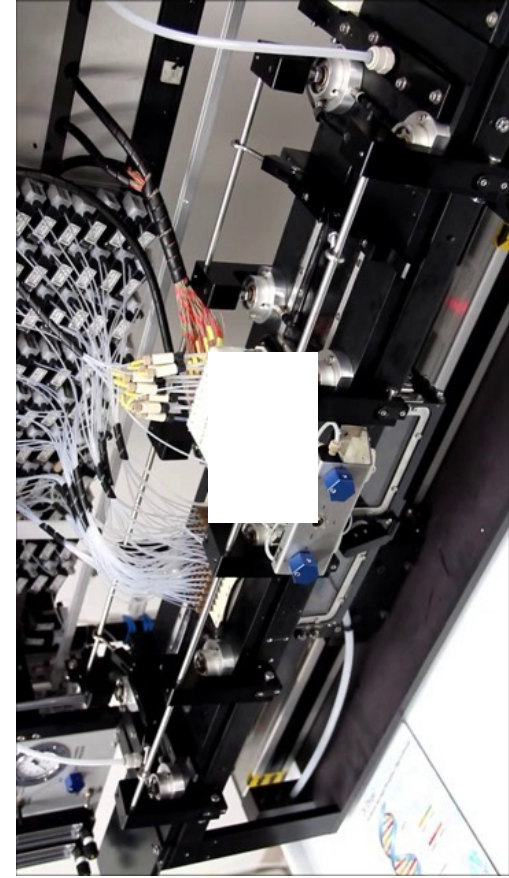
With a user friendly interface, the Dr. Oligo software provides a robust and trouble free workflow that is entirely customizable. The built in powerful protocol editor allows total control over your particular chemistry. Create and save macros for complex procedures or modify existing built in macros to suit your own needs. Synthesis can range from 1 oligo to 768 oligos in a single run while scaling from 1 nMole to 2 uMole. The software will automatically adjust reagent delivery according to the scale of the synthesis. Detailed synthesis information can be quickly viewed with the ability to start and stop synthesis at anytime. Utilizing the standard IUB codes, mixed site synthesis can also be performed automatically in any ratio combination. Compatible with all available synthesis media including but not limited to fritted plates with loose CPG, 3900 style columns, and CPG Frits.

Oligonucleotides produced with the Dr. Oligo line of dna synthesizers can be used for Oligonucleotide and Gene synthesis, PCR / RT-PCR , siRNA / RNAi , miRNA, CRISPR Cas9, DNA / RNA sequencing , Immunity and Biochemistry , High-Throughput screening , Natural Product Biosynthesis , Gene Construction , Reverse Transcription PCR , Hybridization , SNPS , other diagnostic or therapeutic research.

*\*According to Biolytic research as of January 2014 \*\*A de-protection chemistry at room temperature is required and reagents must be compatible with synthesis media. \*\*\*7 minutes per cycle at 20 mers / 50 nmol scale \*\*\*\*12 minutes per cycle at 20 mers / 15 nmol scale with double reagent dispensing option \*\*\*\*\*Over leading competitors*

## SPECIFICATIONS

## VIDEO



OLIGOS SYNTHESIZED IN ONE RUN	1 - 768
SYNTHESIS SCALES	1nMole to 2uMole
FLOW CONTROL	Positive Pressure
SYNTHESIS CAPABILITIES	DNA, RNA, 2' OMethyl, LNA
AMIDITE DELIVERY SYSTEMS	Up to 23
SPECIAL AMIDITE DELIVERY SYSTEMS	Up to 19
LOW VOLUME AMIDITE DELIVERY SYSTEMS	Up to 19
DISPENSE NOZZLES PER REAGENT	8 or 16
GAS INPUTS	Bottle Blanketing Purge/Drain Pneumatics
INTEGRATION WITH LAB'S MANAGEMENT SYSTEM	Included
POWER	100-240 VAC, 50-60 Hz, 1,000 VA
SIZE IN INCHES (L X W X H)	83 x 23 x 72.25
MADE IN THE U.S.A.	@ Fremont, CA

## IMAGES



- Additional Wash Bottles Available
- Additional Deblock Bottles Available
- View Synthesis Information at Any Time During Synthesis

- Start Synthesis from Any Point
- Powerful Protocol Editor
- Manual Mode Auto Clean of Nozzles
- Flexible Loading of Oligos onto Plate(s)
- Vary Protocol Based on Cycle
- Map Amidites
- Intelligent Auto Reprime of Amidite Nozzles
- Wash and Purge System
- Easy Trityl Collection

## DOWNLOADS

- PRODUCT DATA SHEET
- PRODUCT FEATURES
- PRODUCT DIMENSIONS

## INTEGRATED CART SYSTEM

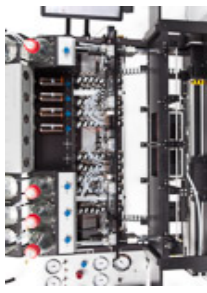
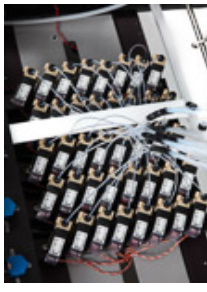
EASY ACCESS -> SLIDE OUT BOTTLE TRAY

Storage for Up to 11  
(4-Liter) Bottles

OPTIONAL SIDE CART ATTACHMENT

Storage for Waste  
Container and 2  
Additional (4 Liter)  
Bottles

POWDER COATED FRAME AND HDPE LINER










Prevents Chemical  
Corrosion

FULL SWIVEL ANTI-STATIC WHEELS WITH BRAKES

Quick and Safe  
Maneuverability

SLIDE OUT KEYBOARD TRAY WITH MOUSE PAD

User Friendly  
Workspace

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My Account	FAQ	Order Support	Company Profile
New Products	Contact Us	Track Your Order	Careers
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