

OligoMaster LS

Large Scale Oligonucleotide Synthesizer RNA/DNA Synthesizer for Diagnostic and Kit Manufacturing

Applications

The **OligoMaster LS** is a Custom DNA/RNA synthesizer designed to operate with superior efficiency at scales in the 0.15 to 5mmole range. A variety column geometries and resin loadings can provide even greater synthesis ranges.

The **OligoMaster LS** operates with a single multi-speed gear pump, which affords high reliability and produces higher quality oligomers over conventional systems developed from a liquid chromatograph purification systems.

The OligoMaster can synthesize DNA, RNA and hybrid molecules. The system comes standard with four monomers reservoirs but is easily upgradable to an additional seven nonstandard monomer reservoirs configurable to meet your process needs. This system can deliver up to 11 ancillary reagents and wash to the column reactor at a variable flow rates.

The turbulent nature of the gear pump provides for enhanced pre mixing of reagents prior to delivery to the reactor. This is essential for high quality oligonucleotide production.

The OligoMaster LS Pump Head

The **OligoMaster LS** utilizes a flow through column reactor. The size shown in this photograph is capable of scales ranging from 100umole to 0.5mmole. Coupling excess requirements are between 3 and 10 fold which is highly competitive with industry standards. Cycle times are approximately 12 minutes for standard DNA coupling and slightly longer for RNA

The new higher loaded supports offered today can provide extended scale capabilities.

System control is based on Genomic Technologies Validate Software. Validate is a fully GMP compliant MMI that provides both system control and continuous system feedback for complete run traceability.

The system makes use of several onboard sensors to control key synthesis operations including trityl monitoring (conductivity or UV). As the synthesis environment of your oligonucleotide changes the system adapts to provide the optimal coupling and deprotection efficiencies.

OligoMaster LS Reagent Consumption * for RNA synthesis

<u>Scale</u>	<u>*100 umoles</u>	<u>250 umoles</u>	<u>500 umoles</u>
Column Volume	30 ml	20 ml	40 ml
WASH	502.5ml	335.0ml	670.0ml
Deblock	54.9ml	37.0ml	64.0ml
Activator	25.0ml	23.8ml	37.6ml
Monomer	5.0ml	5.0ml	12.5ml
Cap A	15.0ml	10.0ml	16.0ml
Cap B	15.0ml	10.0ml	16.0ml
Oxidizer	7.5ml	5.0ml	18.0ml

* Using Low Loading support

All system operations are logged for a complete process record. The system is equipped with on-board diagnostics, which enable system validation prior to synthesis operation.

The system is equipped with an extensive security module that limits control of the synthesizer to authorized users. The security module provides multiple level user access including supervisor, operator and technician levels.

Keyboard and Mouse are Bluetooth enabled for operation away from wetted areas.

Call your local Azco Biotech representative for more information and a quotation.