



aapptec

advanced automated  
peptide protein technologies

Spirit of Innovation

# Matrix 384

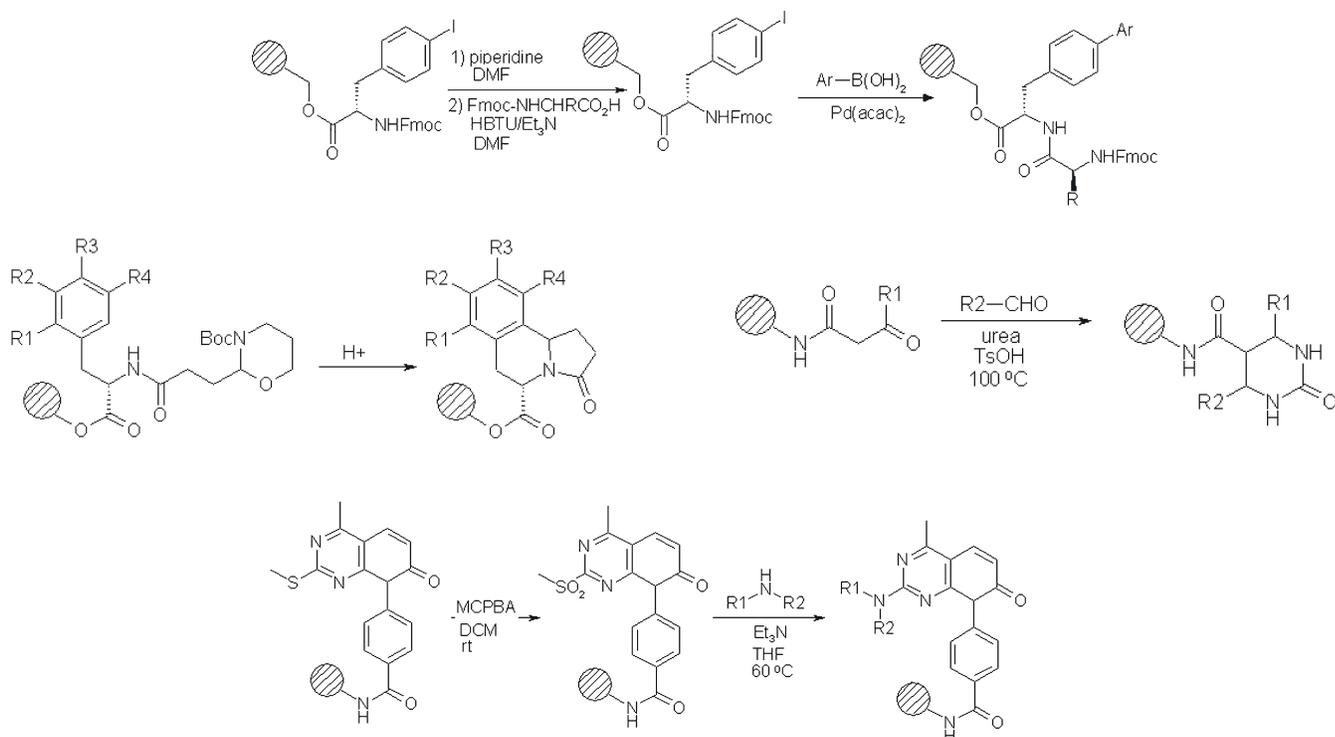


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Automated Ultra High Throughput Synthesizer

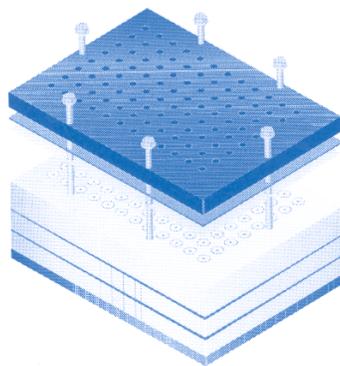
## Automated Ultra High Throughput Synthesizer

The Matrix 384 is the first fully automated ultra high throughput peptide and organic synthesizer to be introduced in the market. It can synthesize up to 384 different compounds simultaneously for rapid, efficient preparation of parallel libraries. Four independently controlled 96 well reactor assemblies allow for a variety of temperatures, reaction times and mixing speeds to be utilized at the same time to optimize library synthesis. Each reactor is divided into four separate zones for further isolation of synthesis operations and reaction conditions.



## Four Independent Reactor Assemblies

The Matrix 384 has four independently controlled reactor assemblies. For standard peptide synthesis, the Classic Reactor assembly is used. Its proven design is an industry standard and is also utilized on the Apex 396 peptide synthesizer. The Ares Reactor assembly allows the performance of organic synthesis not previously possible in a standard open reactor. With complete confidence, low boiling point reagents and solvents, like DCM, DMF, THF, Dioxane and Toluene, can be heated above their boiling points without any significant volume loss. The new, patented, Teflon™ membrane system independently and completely seals the top and bottom of each reactor. This maintains pressure up to 6 barr.

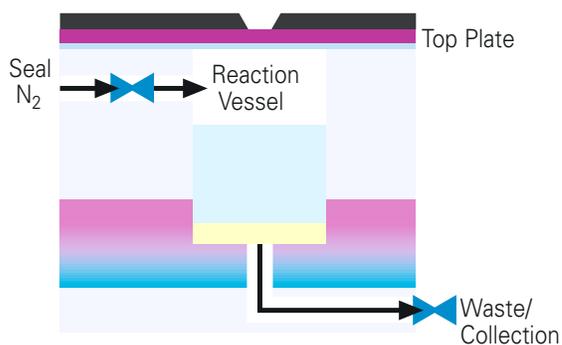


## Variable Speed Vortex Mixing

Variable speed vortex mixing produces thorough, efficient mixing in both the main reaction vessel and the parallel reaction vessels.

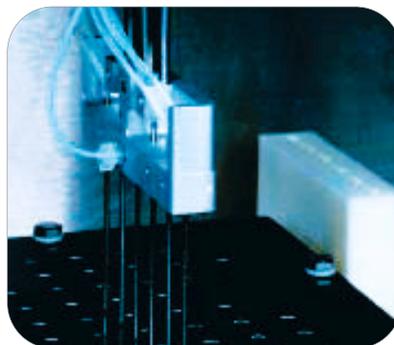
## N<sub>2</sub> Assisted Bottom Filtration

Completely empties up to 96 reactors within one minute, while providing an inert atmosphere that retains the integrity of the prepared compounds. Reagents and wash solvents are completely removed from reaction vessels through bottom filtration.



## MultiProbe Fast Delivery System

The MultiProbe Fast Delivery System reduces synthesis time dramatically. The 6 probes wash an Ares & Classic 96 well reactor assembly in less than one minute. Up to 6 different reagents with unique volumes can be transferred simultaneously within 2 minutes to 96 reactors.



Matrix 384

## A Few Examples of the Reactions the Matrix 384 Can Perform

Aldol	Diels-Alder	Michael Addition
Alkylation	Emmons	Nitro Group Reduction
Amination	Ester Formation	Sonagashira Coupling
Aromatic Substitution	Grignard	Stille Coupling
Baylis-Hillman	Heck Coupling	Suzuki Coupling
Dess-Martin	Imine Formation	Tebbe
Dieckman	Metathesis	Wittig

### Matrix 384 Features & Options

- Program-Controlled Variable Speed Vortex Mixer
- Inert Atmosphere System
- Numerous Reagent, Amino Acid and Reaction Vessel Configurations
- Temperature-Controlled Monomer or Amino Acid Vessels
- 95 mL and 190 mL Monomer Vessels
- Easy-to-Use Windows Software
- Diluter/Syringe Dispensing System with Microliter Accuracy

### SPECIFICATIONS

<b>Width:</b>	56 inches (142 cm) without computer
<b>Depth:</b>	25 inches (63.5 cm)
<b>Height:</b>	36 inches (91.5 cm)
<b>Weight:</b>	600 pounds (272 kg) without computer
<b>Cooling/Heating:</b>	-78 C° to 150 C°
<b>Computer:</b>	HP Pentium-4, Windows XP™ Professional
<b>Monitor:</b>	HP 17" LCD Flat Screen
<b>Printer:</b>	HP Inkjet
<b>Warranty:</b>	On site warranty



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