TITAN 357™

3-In-1 Automated Combinatorial Synthesizer

- Use as a Parallel Synthesizer to Prepare up to 36 Peptides Simultaneously
- Use as a Scale-Up Synthesizer to Prepare Large Quantities of a Single Peptide
- Use as a Split-and-Combine Synthesizer to Generate Combinatorial Libraries up to Millions of Compounds
- Dual Robotic Arms for Precise AA/Reagent Delivery and Resin Transfer
- Variable Speed Vortex Mixing

Visit: www.aapptec.com  Contact: sales@aapptec.com

©AAPPTec, LLC
The Titan 357™ synthesizer is a powerful tool for drug discovery. It serves as three automated synthesizers in one. As a parallel synthesizer it prepares up to 36 peptides simultaneously. It is also a 550 mL scale-up synthesizer, as well as a split-and-combine synthesizer for preparing combinatorial peptide libraries. It can prepare split-and-combine libraries containing millions of compounds for high throughput screening and lead discovery. In lead development and optimization studies, the Titan 357™ can prepare up to 36 peptides simultaneously. Finally, it can prepare single peptides in multi-gram quantities for initial in vivo testing.

**SPLIT-AND-COMBINE SYNTHESISER**

The Titan 357™ synthesizer is the first fully automated instrument for preparing combinatorial libraries containing millions of discrete peptides. It utilizes the split-mix method described by Furka (A. Furka, et al, “Cornucopia of Peptides” Poster, 14th International Congress of Biochemistry, Prague, 1988; A. Furka, et al, “More Peptides by Less Labour” Poster, 10th International Symposium of Medicinal Chemistry, Budapest, 1988). The Titan has a large mixing/reaction vessel, 36 smaller reaction vessels, and a specially designed and treated glass probe for transferring and distributing resin slurry. Resin is suspended and pooled in the large reactor for reactions common to all library members, such as Fmoc deprotection. The resin is suspended in solvent and distributed to the smaller reaction vessels. In each of these smaller vessels, a different amino acid is coupled to the resin. After coupling, the resin is pooled again and mixed for the next distribution and amino acid coupling.

This way, the coupling of each amino acid can be checked for completeness and, if necessary, second couplings can be performed to assure complete reaction before the resin is pooled. The result is a higher quality combinatorial library with each possible peptide equally represented. This is important for some library screening and deconvolution strategies that are based on the assumption that each member of the library are represented in equal quantities.
PARALLEL SYNTHESIZER

The Titan 357™ can also be utilized as a parallel synthesizer that can prepare up to 36 different peptides at the same time. Lead peptides discovered by screening the combinatorial library can be prepared in larger scale for further testing. By utilizing the large reaction vessel, the Titan 357™ can even perform initial scale up experiments. This versatility has made the Titan 357™ a useful tool in many peptide laboratories. Below is a selection of papers published in which a Titan 357™ was utilized.


SCALE-UP SYNTHESIZER

Once lead compounds are identified or large scale synthesis is needed, the reactor assembly of the Titan 357™ features a 550 mL reaction vessel that can be used to prepare larger quantities of a single peptide. The Titan 357™ can prepare multi-gram quantities of peptides.

FEATURES

Special Reactor Assembly

The reactor assembly of the Titan 357™ has a 550 mL main reaction/mixing vessel and 36 parallel reaction vessels.

Variable Speed Vortex Mixing

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

Dual Robotic Arms

The Titan 357™ utilizes one arm to accurately and precisely deliver amino acids and reagents. The second arm is equipped with a special silanized glass probe for transferring resin suspended in solvent, allowing for the split-and-combine protocols.

TITAN 357™ FEATURES & OPTIONS

• Program-controlled variable speed vortex mixer
• Inert atmosphere
• 36-well reactor capacity
• Monomer rack including 125 mL amino acids vessels
• Numerous amino acid and reaction vessel configurations
• Temperature-controlled amino acid vessels(Option)
• 95 mL and 190mL amino acid vessels(Option)
• 550 mL main reactor vessel
• Easy-to-use windows software
• 48-position sample rack
• Diluter/syringe dispensing system with micro-liter accuracy

SPECIFICATIONS

Width: 33”(84cm)
Depth: 29”(74cm)
Height: 35.5”(90cm)
Weight: 300lbs(136kg)
TITAN 357™
Spirit of Innovation™

3-In-1 Synthesizer
Easy-To-Use
Reliable

Over 35 years experience in providing all of your peptide synthesis needs.

Visit: www.aapptec.com
Contact: sales@aapptec.com

6309 Shepherdsville Rd. Louisville, KY 40228, U.S.A.
+1 502-968-2223

©AAPPTec, LLC