



aapptec

advanced automated
peptide protein technologies

Spirit of Innovation

Endeavor 90

Tabletop Peptide Synthesizer



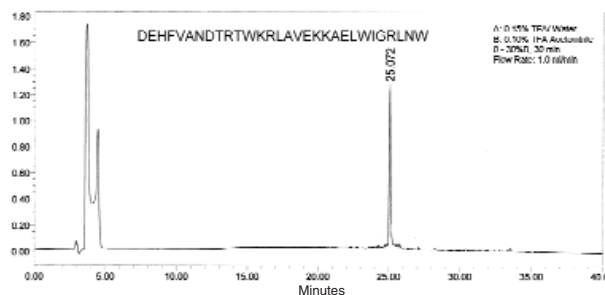
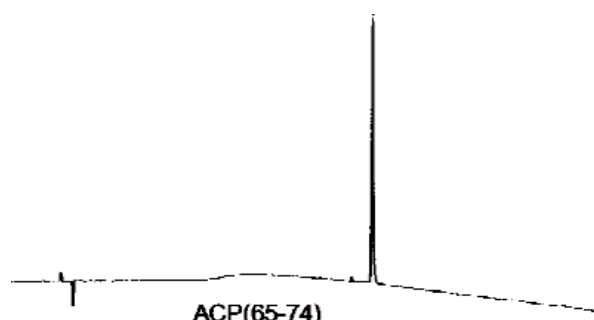
Tabletop Peptide Synthesizer

aapptec's new Endeavor 90 is an automated, easy-to-use solid phase peptide synthesizer with the powerful capability of performing a wide range of solid phase chemistry. This instrument is an excellent choice for discovery research, synthetic methods development, chemical processes and research and production scale. The Endeavor 90 is a tabletop synthesizer with a small footprint, and does not require a hood. It is equipped with single or dual reactors capable of 0.1 - 50 mmol scale synthesis. This affordable instrument provides a high level of flexibility, productivity and reliability for laboratories of all sizes and budgets. Its many features make it the system of choice for researchers who prefer to have precision control and the ability to vary scale. The flexibility of the Endeavor 90 permits a wide range of chemistry, including the synthesis of peptides, organic molecules and DNA, all with different sequences and of varying complexity.



Since its introduction in 1988, the Endeavor 90 has proved to be the most reliable synthesizer on the market. It is an excellent learning tool for beginners in peptide synthesis because of its easy-to-use software and simple command technology. It is also ideal for expert chemists who want to develop new chemistries and processes for large-scale production.

The Endeavor 90 provides documentation backup of all functions to the hard drive, with simultaneous printing capabilities. All liquids are transferred through stainless steel, TFE tubing or glass. Calibration of delivery can also be confirmed to meet all regulations. The software and hardware allows for any type of chemistry, including Boc and Fmoc. In addition, the Endeavor 90 is excellent for small scale peptide production phase I and phase II studies.



VARIABLE SYNTHESIS SCALE

The Endeavor 90 has interchangeable reactor sizes from 25 ml to 2 L. It is available in two different scales:

- The Endeavor 90 is designed for peptide research and small-scale production of peptides in 1 - 10 mmol quantities.
- The flexible Endeavor 90-II is designed specifically for extremely small or large peptide production that is near or beyond the limits of the standard Endeavor 90. The customer can choose either option and we provide all the necessary upgrades to handle the exact scales needed.



DUAL SIMULTANEOUS SYNTHESIS

Two reactions can be conducted simultaneously using the same or completely different chemistries. For example, synthesis of a peptide via Fmoc chemistry and the Michael addition of a thiol to a polymer-bound enone can be conducted in separate reactors at the same time.



AMINO ACIDS

Amino acids can be added in either solid or solution form. If added in solid form, they can be dissolved and activated prior to transfer to reaction vessel. Pre-activation can be accomplished either as mix anhydride or symmetrical anhydride, or any type of activation can be combined. After delivery of the amino acids and reagents, all of the lines are cleaned automatically and the amino acid containers are washed automatically for the next coupling. Available in 90 mL and 250 mL sizes.

INERT ENVIRONMENT AND LIQUID DELIVERY

All liquids in the Endeavor 90 are transferred under nitrogen pressure from any solvent or reagent container. This creates a completely inert atmosphere that is maintained by Nitrogen or Argon, and allows for chemistry that utilizes air- or water-sensitive reagents.

MIXING

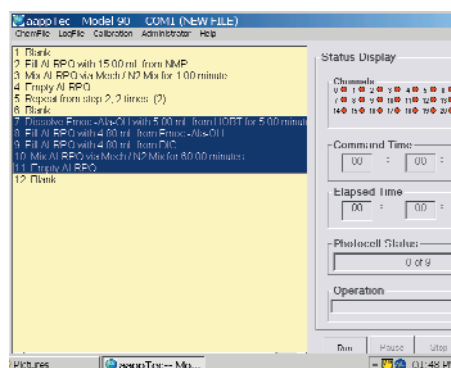
The Endeavor 90 utilizes variable speed wrist action shaking, nitrogen bubbling or a combination of both for efficient, thorough mixing. Mechanical Stirring is also available for larger scales on the Endeavor 90.

EFFICIENT RESIN WASHING

The fast wash command allows the resin to be washed from the top of the reactor through the resin to the waste. The wash command allows the user to add solvent from either the bottom or the top of the reactor for simple washing. Both wash commands provide efficient, uniform washing while keeping the resin intact at the bottom of the RV.

TECHNICAL SUPPORT

All aapptec instruments are backed by our unparalleled expertise in solid phase, peptide and combinatorial chemistry. A qualified team of technical support and application specialists is dedicated to answering your questions related to instrument operation or specific chemistry applications.



Endeavor 90

Endeavor 90 Features & Options

- Sophisticated capabilities at an affordable price
- Flexible enough for solid phase peptide, organic and combinatorial chemistry
- Applications in research process development and production
- Dual simultaneous synthesis with wide variability in scale
- Intuitive software provides standard protocols plus the power to customize
- Minimizes operating and maintenance costs

SPECIFICATIONS

Width:	25.25" (64 cm)
Depth:	14.75" (37.5 cm)
Height:	32" (81 cm) including reagent bottles
Weight:	80 lbs (37 kg)
Fluid Transfer:	Nitrogen pressure, regulated to 10 psi (Pa 68947)
Cycle Time:	Organic: Depends on chemistry Peptide: Approximately one to two hours for concurrent dual synthesis, 45 minutes for rapid, small-scale HBTU-activated single reactor runs
Control:	Microsoft Windows XP™

Standard Configuration

Endeavor 90 – (2) 25 mL reactant vessel

Endeavor 90-II – (1) Choice of any reactant vessel size

Optional RV Sizes: 5, 25, 50, 100, 200, 300, 500, 1L and 2L

Reactors above 100 mL are utilized in the single reactor configuration

Four 90 mL reactant vessels (250 mL optional for large scale synthesis)

Three 2L reagent bottles (5L+ standard for large-scale platforms)

Four 1L reagent bottles (2L+ standard for large-scale platforms)

Integrated deprotection/cleavage reagent system

SCALE

Dual Reactor: 0.05 to 5 g resin (from 20 mg to 5-6 g crude product)

Single Reactor: Up to 35 g resin (approximately 30-35 g crude product)
(optional 1L & 2L RV allows 50 g - 200 g resin)

WARRANTY

One-year limited parts and labor



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Endeavor 90