

One of the principal attributes of the solid-phase method has been to make the synthesis of peptides accessible to the nonspecialist. With the increased sophistication of automated instrumentation and purification procedures, the technology is diffusing broadly. It is important, however, not to lose sight of the fact that each procedure has limits, and that even in the hands of highly experienced workers, some sequences will defy easy preparation.

Improvements in the chemistry of peptide synthesis continue rapidly. Important topics of research being investigated that will have an impact on commercial production include:

- (1) increased efficiency of steps leading to shortened cycle times to attach an amino acid;
- (2) better monitoring methods;
- (3) preparation of protected peptide segments by mild reactions and the solid-phase assembly of the peptide segments;
- (4) scale-up procedures;
- (5) multiple peptide synthesis approaches; and
- (6) precise control of methods for forming sulphur-sulphur bonds in synthetic peptides.