Increased Resistance of Peptides to Serum Proteases by Modification of their Amino Groups

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The ability of synthetic protein fragments to survive the degradative action of aminopeptidases and serum proteolytic enzymes can be remarkably enhanced by slight modifications at their N-terminal alpha-amino group. This can be achieved by addition of beta-alanine or amino acids of the ψ-configuration, amino acids which are seldom found in a living organism. These modifications do scarcely modify the chemical and physical properties of the peptides, and should be preferred, especially for in vivo tests, to drastic alterations of peptides as produced by dinitrophenylation or dansylation of the amino groups.

Key words: Peptides, Proteolytic Degradation, Modifications