

Syntheses of Peptides via Ugi Reaction with some heteroaromatic aldehyde and S-4-methoxyphenyl ethylamine as amine

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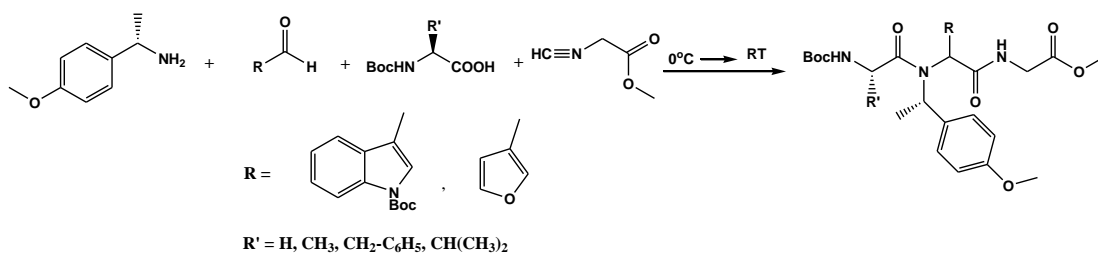
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Annotation: Peptides are found in all living organisms. They control biochemical and physiological processes in the organisms. A multicomponent reaction (MCR) such as Ugi reaction provides a linear, peptide-like adduct. Influence of a solvent on the yield of reaction products and stereoselectivity is studied in the Ugi reaction [1-3].

Aminoacids (L-alanine, L-phenylalanine, L-valine, glycine) as acid component, (S)-p-methoxyphenylethylamine, heteroaromatic aldehyde (3-indolaldehyde, 3-furaldehyde) and methyl-2-isocianoacetate were used as initial components; methanol and 2,2,2-trifluoroethanol (TFE) served as solvents.

Scheme 1



It is established that the reaction output is higher than in triphotethanol. As for stereoselectivity, influence of solvent substitution on the diastereometric composition of the product is insignificant.

References

- [1] Dömling, A, *Chem. ReV.* (2006) v.106, p. 17
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- [3] U. Kazmaier, C. Hebach, *Synlett*, (2003), vol.11, p. 1591-1594.