

The Formation of Oligopeptides in good yield under Geyser System Model

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The peptide bonds to link amino acid into short oligopeptides and protein are vital for biology, but on the prebiotic Earth, how these peptide bonds formed before the emergence of enzymes still remains unsolved.

In this study, a one-pot wet-dry geyser reactor system was developed to explain how unactivated amino acids were condensed to oligopeptides. Using this system, glycine oligopeptides could be formed in around 40% yield under acid condition. We also investigated these oligopeptides formation reactions under different high temperature and different pH in one cycle.