

Kinetics of the formation of methylol groups in urea-formaldehyde precondensates on the catalyst

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The reaction of urea and formaldehyde, giving monomethylolurea, dimethylolurea, trimethylolurea and tetramethylolurea, is reversible in a neutral, acid or alkaline aqueous solution. The nature and the velocities of the reactions occurring in concentrated solutions of urea and formaldehyde are found in dilute systems. A rapid initial reaction between urea and formaldehyde is shown to be due to the analytical method used by methyl-red and methylene-blue titration.