

Chemical reactions of carbohydrates play important roles in various environmental processes such as energy production, food digestion, and flavor development. This process is commonly used in the production of alcoholic beverages and bread. Oxidation: Carbohydrates can undergo oxidation reactions in the presence of certain enzymes or chemicals to produce various compounds such as aldehydes, ketones, and carboxylic acids. Fermentation: Carbohydrates can undergo fermentation reactions in the absence of oxygen to produce various products such as ethanol, lactic acid, and carbon dioxide. Maillard reaction: Carbohydrates can undergo the Maillard reaction with amino acids in the presence of heat to produce various compounds responsible for the browning and flavor development in foods. Hydrolysis: Carbohydrates can undergo hydrolysis reactions in the presence of water and certain enzymes to break down into simpler sugars or monosaccharides. Combustion: Carbohydrates can undergo combustion reactions in the presence of oxygen to produce carbon dioxide and water. This process is commonly seen in the browning of bread crusts and grilled meats. Among these reactions are: 1.2.3.4.5.