

Chemistry of n (CO 10)

Student's Name

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CHEM 120

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Date Submitted

Chemical digestion

- ▶ Chemical digestion “involves the catalytic process of breaking down food in the gastrointestinal (GI) tract by digestive enzymes, aided by co-secreted substances, required to break down the food substances into simpler molecules for absorption” (Welcome, 2018).
- ▶ Large food molecules i.e. nucleic acids, carbohydrates and proteins must be broken down to small molecules that can be of great help in providing the body with energy and improving the body system.
- ▶ Enzymes make this possible through hydrolysis.

Nucleic acids

- ▶ DNA and RNA are synthesized and degraded. Nucleic acid synthesis is an anabolic mechanism having to do with the synthesis of a nucleotide having a phosphate, a pentose sugar, and a nitrogenous base.
- ▶ **COMPOSITION:** has a series of building blocks called nucleotides, each having a nitrogen-containing aromatic base attached to a pentose sugar connected to a phosphate group.
- ▶ Relating with nutrition, dietary nucleic acids occur in the form of nucleotides.
- ▶ The break-down of these compounds involve complex chemical reactions in the body.
- ▶ Nucleic acids undergo partial hydrolysis in the stomach and small intestine by pancreatic nucleases and phosphoesterases to yield nucleotides and nucleosides.
- ▶ Under these circumstances, the supply of nucleic acids is not considered necessary and could be beneficial in maintaining normal metabolic functions