Carbohydrates are the most abundant and one of the four essential macromolecules, required for the survival of living beings. Structurally, these are polyhydroxy aldehydes or ketones. Carbohydrates are divided into three classes depending upon the number of forming units (aldehyde or ketone), which are *monosaccharides*, *oligosaccharides*, and *polysaccharides*.

These carbohydrates have extensive roles to perform inside the living organism. Monosaccharides, the simplest unit of carbohydrates, including glucose, which acts as an energy source, and amino sugars are the structural part of oligosaccharides and polysaccharides. Disaccharides like sucrose and maltose are used as sweetener and sucrose also acts as a major source of energy in plants. Polysaccharides provide mechanical support to cells in different organisms and they also help in energy storage

Type of Carbohydrate	Fixative to Use
Glycogen	• Formaldehyde containing fixative (*good if sample tissue source is liver, but no reasonable results will be obtained with muscle cell or placenta.)* • Bouin's fixative at 4 °C which contains picric acid, formaldehyde, and acetic acid. *(streaming artifacts can be observed)* • For better results, instead of freezing, Lison's "Gendre fluid" at -73 °C which contains ethanol, formaldehyde, picric acid, and acetic acid can be used.
Glycoproteins	• It can be fixed with all protein fixatives. For example, Bouin's fixative or Formaldehyde containing fixative.
	• Lead salts can be used as a fixative. • Cetylpyridinium chloride (CPC) with an aqueous solution of formaldehyde. **Note:** Do not store or use any fixative at 0 °C that contains CPC. • 5-amino-acridine chloride with 50% v/v ethanol.