

Topic: Cell Organelles
B.Sc. Botany Hons. III
Paper: V Group: A

Dr. Sanjeev Kumar Vidyarthi
Department of Botany

Dr. L.K.V.D. College, Tajpur, Samastipur
L.N. Mithila University, Darbhanga

Cytoplasm

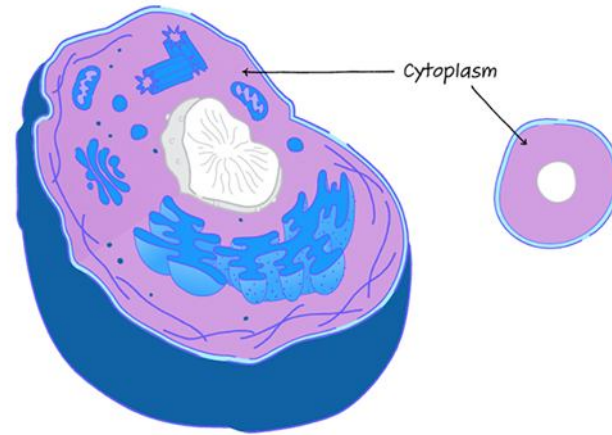
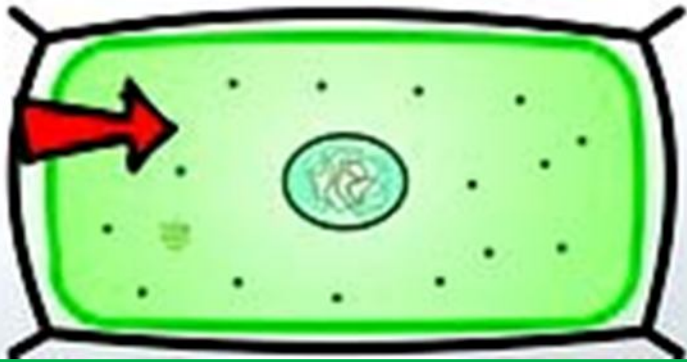
Cytoplasm refers to everything present inside the cell except the nucleus.

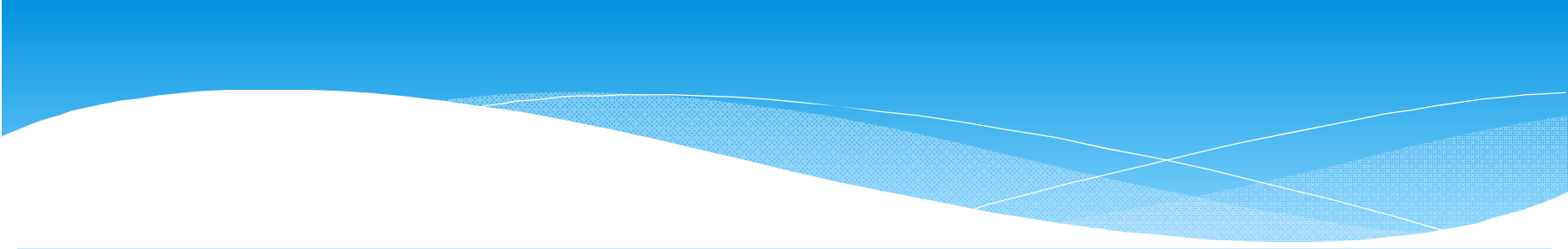
Structure

- The cytoplasm consists of a cytosol; a gel-like substance that contains other matter; cell organelles; smaller cell-like bodies bound by separate membranes; and cytoplasmic inclusions; insoluble molecules that store energy and are not surrounded by any layer.
- The cytoplasm is colorless and has about 80% water along with various nutrients required for the cell.
- It is known to have the properties of both viscous matters as well as elastic matter.

cytoplasm

the gel-like fluid that fills the cell



- 
- Under its elasticity, cytoplasm helps in the movement of materials inside the cell by a process termed cytoplasmic streaming.

Functions

- i. Most of the vital cellular and enzymatic reactions like cellular respiration and translation of mRNA into proteins occur in the cytoplasm.
- ii. It acts as a buffer and protects genetic materials as well as other organelles from damage due to collision or change in the pH of the cytosol.
- iii. The process called cytoplasmic streaming helps in the distribution of various nutrients and facilitates the movement of cell organelles within the cell.