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CLASS - 9 A D E F

Plastids - The kitchen of the cell

Plastids are the largest cell organelle found in plant cell only.

These are also double membrane structures oval, spherical or discoidal in shape .

Plastids are of three types :

- Chloroplast : these are found only in green plant. They contain green pigment called chlorophyll which is required to trap the solar energy. And is used for the synthesis of food by the process of photosynthesis. Therefore chloroplast are called kitchen of the cell.
- Chromoplast : which contain yellow, orange and red pigment . They are mostly present in the petals of flowers and fruits . It provides other than green colour to the plants .
- Leucoplast : These are colourless plastids without anything pigment. It helps to store starch, protein and lipids.

VACUOLES :

Vacuoles are fluid- filled membrane bound clear spaces in the cytoplasm.

The membrane around the vacuole is called **tonoplast** and the liquid that contain is called CELL SAP.

In animal cells, vacuoles are absent but if present they are much smaller. It is mainly present in plant cell.

Functions of vacuoles :

- The keep the cells turgid and provide them rigidity and support.
- Sap vacuoles maintain osmotic concentration in plant cells needed for water absorption .
- They store food material and waste products.
- Food vacuoles in protozoans helps in digestion of food.

Lysosomes : The suicide bags of the cell :

Lysosomes are found only in animal cells .

These are spherical and sac-like vesicles formed by single membrane .

The contents of digestive enzymes which are synthesized in RER .

When released these enzymes bring about digestion is of various cytoplasmic structures . If these are released in the cells they would result in auto digestion of the cells . Hence, lysosomes are referred as the suicide bags of the cell .

Functions of lysosomes:

- Lysosomes protect the body from bacteria and viruses by digesting them.
- They destroy old worn out cell organelles.
- They digest the stored food and even own organelle during starvation .
- When a cell is destined to die, lysosomal enzymes digest the whole cells .
- Lysosomes help in the intracellular digestion .