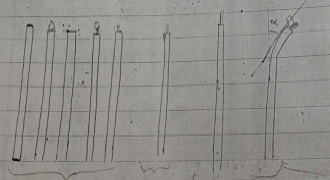
(4)

are grown in Controlled Condition. Their tips are separated from the stump by a sharp instrument. They are placed on Agar blocks. After a few hours Agar block is cut into pieces. A piece is then placed eccentrically on stump. It is noted that stump bends in opposite direction. The curvature α (alpha) of each stumps were measured. It is plotted against auxin concentration to determine the bioassay of the phytohormones.



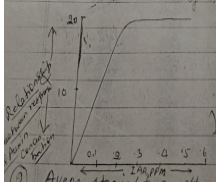


fig- diagrammatic representation of the Avena Curvature test

(2) Avena straight growth test ⇒ In this experiment a single Avena Coleoptile is taken. It is cut into the several small pieces. The length of each piece is measured (L). Then the pieces are floated in test solution for several hours. Finally the length of each

(3)

small pieces. A piece was placed on the stump. The stump started to grow. When the Agar block was placed eccentrically on the stump, the characteristic bending was observed. Finally the Agar block was analysed to isolate the chemical known as Indol-3-Acetic acid or Auxins. It is the well known and well investigated universal plant hormone.

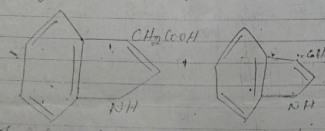
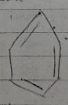


fig- Naturally occuring Auxin and Auxin precursors



Phenyl lacetic acid

Definition- It is a specific phytohormone which promote growth of stem or Coleoptile section and decapitated Coleoptile but in the same concentration incapable of causing growth on intact plant.

Bioassay of Auxin ⇒ Five methods have been suggested for Auxin bioassay.

1) Avena Curvature test
2) Avena straight growth test.

1) Avena Curvature test ⇒ Several Avena Coleoptile