

CARBOHYDRATE

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M. H. Khan D2(H) 6-5-20 Wed → Topic

* Carbohydrate :- carbohydrate
maxwari college Time 2.10-3.00

Compound in which must at least one O-H, aldehyde and ketone group as well as 3-Carbon present. It having hydrogen two oxygen ratio similar to water. Compound which give shape, size and energy and necessary for life.

* Classification of Carbohydrate on the basis of no. of mono-saccharide present :-

(i)

Monosaccharide

↓

1

↓

glucose unit

(ii)

Disaccharide

↓

↓

glucose unit

(iii)

Oligosaccharide

↓

↓

Greater than 2 less than 8 Glucose Unit

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(iv) Poly saccharial

↓ ↓
Greater than 7 Glucose unit

(1) Mono saccharial

↓ ↓
1 Glucose unit

— Carbohydrate in which only one glucose unit present glycosidic linkage or bond (C-O-C) absent because no. of glycosidic linkage = No. of monosaccharide - 1

eg:-

Glucose, Fructose

— All monosaccharides are reducing sugar because it reduce to fehlic solution (red precipitate of FeO) and tollens reagent (silver mirror test)

- All monosaccharide show mutarotation (+ve and -ve dextro and levo form) and osazone formation.
- Anomer: - When compd. has same molecular formula but different structural formula due to different arrangement at C1 Chiral center.
- Epimer: - When compd. having same molecular formula but different structural formula due to different arrangement at other than C1 Carbon.

* Glucose - ($C_6H_{12}O_6$)

- It is a monosaccharide in which one aldehydic group and 5 alcoholic group present in which 1 primary alcohol and 4 secondary alcohol present.