

# IDENTIFICATION OF UNKNOWN CARBOHYDRATE

## PRELIMINARY TESTS

**Colour**

**Odour**

**Reaction to litmus** : All carbohydrates are neutral

**Solubility** :

### Scheme

Molisch's Test

↓ Positive

Carbohydrates present

Iodine Test  
Positive

↓ Polysaccharides

Blue  
Starch

Red-violet, Purple  
Dextrin

Negative

Apply Benedict's Test  
(Monosaccharide or disaccharide)

-ve

Non-reducing sugar  
sucrose  
C.T. - Positive  
selivanoff's test  
after inversion.

+ve

Apply Barfoed's test

Positive  
Monosaccharide

Negative  
Reducing Disaccharides

Saliwanoff's test

Apply Osazone test

Negative  
**Glucose**

Positive  
**Fructose**

Sunflower  
shaped  
Crystals  
**Maltose**

Puff  
shaped  
crystals  
**Lactose**

### Confirmatory tests:

- |   |   |
|---|---|
| 1. Blue Colour disappears on heating, reappears on cooling.                       | 1. Colour disappears on heating but does not reappear on cooling.       |
| 2. Jelly formation with NaOH  | 2. No jelly formation   |
| 3. Complete precipitation by $\frac{1}{2}$ Sat. with $(\text{NH}_4)_2\text{SO}_4$ | 3. Complete precipitation by full sat with $(\text{NH}_4)_2\text{SO}_4$ |
| 4. Positive tannic acid test  | 4. Negative tannic acid test  |

C.T. = Confirmatory test



