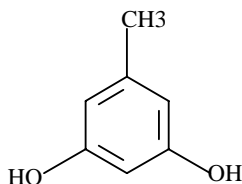




## Quantitative Estimation of Pentoses

### Principle:

When pentoses are heated with conc. HCl, furfural is formed which condenses with orcinol in the presence of ferric ions to give a blue-green color.



orcinol (3,5-dihydroxytoluene)

### Materials:

1- Orcinol reagent. (Dissolve 1.5 g of orcinol in 500 ml of conc. HCl and add 20 drops of a 100g/l solution of FeCl<sub>3</sub>.)

or 1.5 g Orcinol + (0.5 g FeCl<sub>3</sub> + 500 ml conc. HCl)

### Procedure:

Carry the experiment in two test tubes one for the standard and the other for the unknown. In each tube place the following:

- 1- 7.5 ml Orcinol reagent.
- 2- 2.5 ml sample. Shake well.
- 3- Heat for 25 minutes in a boiling water bath with a marble on top of each tube (use a glass stopper).
- 4- Cool to room temperature in cold water.
- 5- Read at 665 nm.

## **Calculation:**

Standard : Ribose 2mg/ml (0.2%) in water.

Concentration of unknown =  $\frac{\text{Absorbance of unk}}{\text{Absorbance of std}}$  x Conc of std

*Name:*

*No.*

***Experiment 5:***



**Results Sheet**

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Concentration of standard pentose solution :            mg/ml

Calculations:

$A_{st.} =$

$A_{un.} =$