**Microoganisms in bread & cereal grains**

 The cereal include: rice, corn, wheat &starch.

\*Sources of microbial contamination:

Water ,air ,soil ,birds ,rodents &insets.

\*there are 2 factors which control on microbial growth & reproduction in cereal grains:

1)moisture

2)storage temp.

\*the toxin producers of fungi when the cereal grains stored in a moisture place.

**The most important microbes which spoilage :**

 Mold character of spoilage

 Penicillium green growth

 Mucor white growth

 Aspergillus niger black growth

 Rhizopus white growth with black spots

Bread microbial spoilage

Molds+ yeasts+ bacteria

 If transfer from flour to dough when adding the water

 Spores begin to grow

 Acidic fermentation alcoholic fermentation

 Lactic acid production ethanol +CO**2**

 Souring dough produced gases

LABwork

 **General microbes (aerobic plate count)**

**Nutrient agar**

 10**-4 1 ml 37Co/24hrs**

**Yeast extract agar**

**To detection Of the mold & yeast**

 10**-2 37Co/24hrs**

**To detection Of bacteria spore- forming**

**10-3**

 Water bath/15 min cool 1ml

**Nutrient agar**

 37C**o** / 24hr