#  Fermentation of flour by Baker's yeast

* Yeasts : are [eukaryotic](https://en.wikipedia.org/wiki/Eukaryote) [unicellular](https://en.wikipedia.org/wiki/Unicellular_organism) [microorganisms](https://en.wikipedia.org/wiki/Microorganism) , classified as members of the [fungus](https://en.wikipedia.org/wiki/Fungus) [kingdom](https://en.wikipedia.org/wiki/Kingdom_%28biology%29) , Most yeasts reproduce known as  [budding](https://en.wikipedia.org/wiki/Budding) , they are largest of the bacteria , yeast species either require oxygen for aerobic cellular respiration or are anaerobic. Yeasts growth are inhibited by [salt](https://en.wikipedia.org/wiki/Sodium_chloride) .
* *Saccharomyces exiguus* (also known as *S. minor*) is a wild yeast found on plants, fruits, and grains that is sometimes used for baking .
* *Sacharomyces cerevisiae* is baker’s yeast that use in [bread](https://en.wikipedia.org/wiki/Bread) & [pastries](https://en.wikipedia.org/wiki/Pastry), this yeast is carefully selected for:

**1) Available and cheap.**

**2(Its capacity to produce abundant gas.**

**3)Its viability during storage .**

**4)Its ability to produce desirable flavor .**

Therefore its prefers among yeasts.

**Fermentograph :** a special device is used to measure the strength of the fermentation occurring in dough, Where the yeast, flour and water are placed then this device begins draw a line graph of the increase in size of the dough**.**

 **\*Measurement of yeast activity for dough fermentation:**

1- Mix 50 gm of flour + 1 gm yeast (dry) or 10 ml (liquid) + 30 ml water to make dough .

2- Insert the dough in a 100 ml graduated cylinder or baker smeared with oil to prevent its adherence with glass wall .

3- Press it to the bottom & measure the volume, incubate at warm condition.

4- Record the volume every 10-mint for an hour.

5- Write the values in a table

|  |  |
| --- | --- |
| **Time (min)** | **Volume of the dough** |
|  **0** |  |
|  **10** |  |
|  **20** |  |
|  **30** |  |
|  **40** |  |

**6-calculte the % of volume increasing=(final volume / initial volume)× 100.**

 **Compare different kinds of yeasts by this test.**