



**Unit IV - Topic 1**  
**Beer Manufacturing Process**

**Definition**

Beer is a brewed and fermented drink prepared from malted cereals, especially barley. In the brewing process, the malt is extracted from the cereal by addition of hot water which results in the product called wort and the hops are added to hot wort to obtain flavor and bitter taste. It is then cooled and fermented with the addition of yeast..

**Production of Beer**

Beer production involves a series of complicated process, the following are the steps involved in the production of beer.

- Malting
- Brewing
- Hop back
- Cooling and pitching
- Fermentation
- Maturing and pasteurization
- Brightening and clarifying
- Packaging

**Process of beer making**

**Step 1:** Barley is harvested. The best quality of barley is taken and soaked in water for 3 to 4 days.

**Step 2:** Soaked barley is spread on malting floor to germinate.

**Step 3:** Germinated cereal is termed as green malt

**Step 4:** The green malt is dried and roasted from pale to very dark depending on the style of beer produced

**Step 5:** The roasted malt is cleaned and crushed to powder. This is termed as grist

**Step 6:** Grist is mixed with hot water at the temperature of 65°C. It is termed as mash

**Step 7:** Mash is allowed to infuse to extract malt sugar. The liquid is now termed as wort **Step 8:** The

wort is drained to a clean container. The residue of the cereal is sold as cattle food

**Step 9:** Hops and sugar are added to wort and boiled to extract the bitter flavor of hops

**Step 10:** Wort is transferred to hop back to remove the hops and the wort is passed through the spent hops to remove the sediments.



**Step 11:** Cooled by paraflow method to 15°c

**Step 12:** Cooled sweet wort is transferred to other container for fermentation

**Step 13:** Yeast is added. *Saccharomyces cerevisiae* yeast is used for top fermentation which produced ale beer at 15 – 25°c and *saccharomyces carlsbergensis* yeast is used for bottom fermentation which produces lager beer at 5 – 9°c

**Step 14:** The beer is now matured

**Step 15:** Matured beer is racked into casks, tanks and kegs

**Step 16:** Brightened with addition of isinglass

**Step 17:** Bottled, canned, racked into sterilized casks

**Step 18:** Dispatched to market for sale

### Brand Names

| Brand Name                      | Country        |
|---------------------------------|----------------|
| Pilsner, Ostrava, Budweiser     | Czech Republic |
| Kingfisher, Golden Eagle, Cobra | India          |
| Corona                          | Mexico         |
| Fosters                         | Australia      |
| Tiger                           | Singapore      |
| Dortmunder                      | Germany        |
| Royal coachman, Cold cock       | Canada         |
| Anchor, Brooklyn Lager          | USA            |
| Heineken, Amstel                | Netherlands    |

### Conclusion

Beer is an alcoholic drink obtained from fermented brew of barley malt. The average alcoholic content of beer is 4%. The basic styles of beer are ale and lager, available in various alcoholic strength. Beers should be stored in well ventilated rooms away from the sunlight. The ideal temperature of a beer cellar is 13 – 15°c. Frequent fluctuations in the storage temperature will spoil the beer.