Fermentation is the transformation of sugar and other nutrients into something that is beneficial to humans through the action of microorganisms.

<table>
<thead>
<tr>
<th>Food and alcohol</th>
<th>Raw materials for foodstuff and pharmaceuticals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast</td>
<td>Amino acid-producing bacteria</td>
</tr>
<tr>
<td>Yeast</td>
<td>Lactic-acid bacilli</td>
</tr>
<tr>
<td>Yeast</td>
<td>Bacillus natto (fermented soybeans)</td>
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<tr>
<td>Wine</td>
<td>Yogurt</td>
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</table>
Fermentation in beer

Beer is made by alcoholic fermentation with brewer's yeast.

- Malt-derived
  - Glucose
  - Maltose

- Brewer's yeast

Alcoholic fermentation

- Alcohol
- Carbon dioxide
- Flavoring ingredients

Beer
Fermentation in beer

The flavor of the beer will vary depending on the type of brewer's yeast and fermentation conditions.

**Main yeast types**

- **Lager yeast**
  - Lager beer
  - Refreshing and easy-to-drink

- **Ale yeast**
  - Ale beer
  - Rich taste

**Fermentation conditions**

- Temperature
- Time
- Aroma
- Taste
  - Smoothness going down
  - etc...

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Kirin's unique technologies (1)

We have produced various types of yeast using our unique technology. Currently, we have about 1,000 varieties of brewer's yeast at our disposal.

- Natural mutation
- Crossing of different yeast

Enhancing our brewer's yeast bank

Selection

Beers are developed from various yeasts
Kirin's unique technologies (2)

We have the technology to visualize and appropriately control the "health status" of brewer's yeast, which affects the taste of beer.

Healthy yeast

Cannot be identified with a normal microscope

Color-coded by pH, which serves as an indicator of yeast health

Unhealthy yeast

Health status can be distinguished based on color!

Red: Healthy
Blue: Unhealthy
We have expanded our yeast technology by applying it to other microorganisms.