

VINEGAR PROCESSING



Definition

Types

Process steps

Post fermentation process

DEFINITION

VINEGAR IS AN AQUEOUS SOLUTION OF ACETIC ACID, TYPICALLY CONTAINS 3-5% ACETIC ACID AND IS PRODUCED BY A DOUBLE FERMENTATION, CONVERTING SIMPLE SUGAR TO ETHANOL USING YEAST AND ETHANOL TO ACETIC ACID BY ACETIC ACID BACTERIA

TYPES

- WHITE VINEGAR
- APPLE CIDER VINEGAR
- BALSAMIC VINEGAR
- WINE VINEGAR
- RICE VINEGAR
- MALT VINEGAR

TWO STEP

PROCESS

ALCOHOL FERMENTATION

yeast enzymes use sugar (present in fruit) to produce alcohol(ethanol) and carbon dioxide gas

SUGAR(FRUCTOSE, GLUCOSE) -----> ETHANOL +2CO₂

ACETIC ACID FERMENTATION

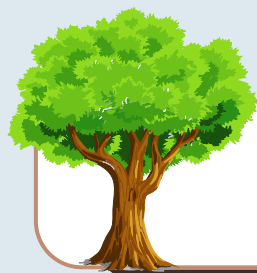
By the action of acetic acid bacteria, the alcohol produced reacts with atmospheric oxygen to produce acetic acid and water

ETHANOL -----> ACETIC ACID + H₂O



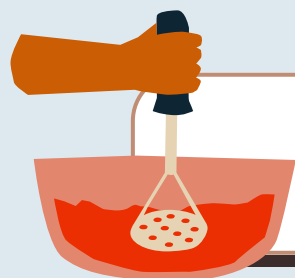
Alcohol + Oxygen + Bacteria → Vinegar

PROCESS STEPS



HARVESTING

WASHING & GRADING



MASHING

SETTLING



FERMENTATION & AGEING

BOTTLING



Post-fermentation Process

1

Ageing

Vinegar produced by quick process is kept for aging for about six months.

2

Pasteurization

It is heated in an open vessel to about 60 degree C and then cooled and bottled.

3

Clarification

Before bottling, vinegar is made sparkling clear.

Spoilage of Vinegar

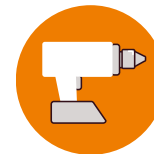
Lactic acid producing bacteria grow initially and spoil the vinegar.

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