

The local preparation of alcohol from cassava flour involves a process of fermentation and distillation. Cassava, a starchy root crop, is a common raw material for alcohol production in many regions, especially in Africa, Asia, and South America. Below is a step-by-step description of the traditional process:

1. Selection and Preparation of Cassava Flour

- **Raw Material**: Fresh cassava roots are harvested, peeled, and washed to remove dirt and impurities.
- **Drying and Grinding**: The cleaned cassava roots are dried and ground into flour. Alternatively, cassava flour can be purchased directly if already processed.

**2. Gelatinization

- The cassava flour is mixed with water to form a slurry or paste.
- The mixture is heated to gelatinize the starch, making it more accessible for enzymatic breakdown. This step typically involves boiling the mixture until it thickens.

**3. Saccharification (Conversion of Starch to Sugar)

- Enzymes (such as amylase) or malted grains (e.g., sorghum or barley) are added to the gelatinized cassava mixture to break down the starch into fermentable sugars (e.g., glucose).
- This process may take several hours, depending on the temperature and enzyme activity.

**4. Fermentation

- The sugary liquid (now called "mash") is transferred to a fermentation vessel.
- Yeast (e.g., *Saccharomyces cerevisiae*) is added to the mash to convert the sugars into alcohol and carbon dioxide.
- The mixture is left to ferment for 2–7 days, depending on the desired alcohol content and local practices. During this time, the yeast consumes the sugars and produces ethanol.

**5. Distillation

- After fermentation, the liquid contains alcohol, water, and other by-products. To concentrate the alcohol, the mixture is distilled.
- The fermented mash is heated in a still (often a simple pot still in local settings). The alcohol evaporates at a lower temperature than water, and the vapor is collected and condensed back into a liquid.
- The resulting distillate is a higher-proof alcohol, often referred to as "cassava spirit" or local liquor (e.g., "akpeteshie" in Ghana or "kasiri" in some regions).

**6. Purification and Aging (Optional)

- The distilled alcohol may be filtered to remove impurities or aged in containers to improve its flavor and smoothness.
- In some cases, local herbs or spices are added for flavoring.

**7. Bottling and Consumption

- The final product is bottled and consumed locally. The alcohol content typically ranges from 20% to 40%, depending on the distillation process.

**Key Considerations

- **Safety**: Proper hygiene and equipment maintenance are crucial to avoid contamination and ensure the safety of the final product.
- **Regulation**: In many regions, local alcohol production is subject to regulations, and unlicensed distillation may be illegal.
- **Sustainability**: Cassava is a resilient crop, making it a sustainable raw material for alcohol production in many rural areas.

This traditional method of alcohol production from cassava flour is deeply rooted in local cultures and economies, providing livelihoods for many communities.