

Impact of Millet Adjunct on Physicochemical and Sensory Characteristics of a Non-Alcoholic Beverage from Malted Sorghum

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INTRODUCTION & AIM



Plate 1: Unmalted sorghum grains



Plate 2: malted sorghum

Malted sorghum and finger millet are nutritious, drought-tolerant local grains that remain underutilized in Nigerian beverage production.

Non-alcoholic malt drinks are increasingly popular and offer a healthy beverage option. Using local grains can promote sustainable and cost-effective beverage development while reducing dependence on imported brewing materials. Study aims to evaluate the impact of millet inclusion as an adjunct on the physicochemical and sensory properties of a non-alcoholic beverage produced from malted sorghum.

METHOD

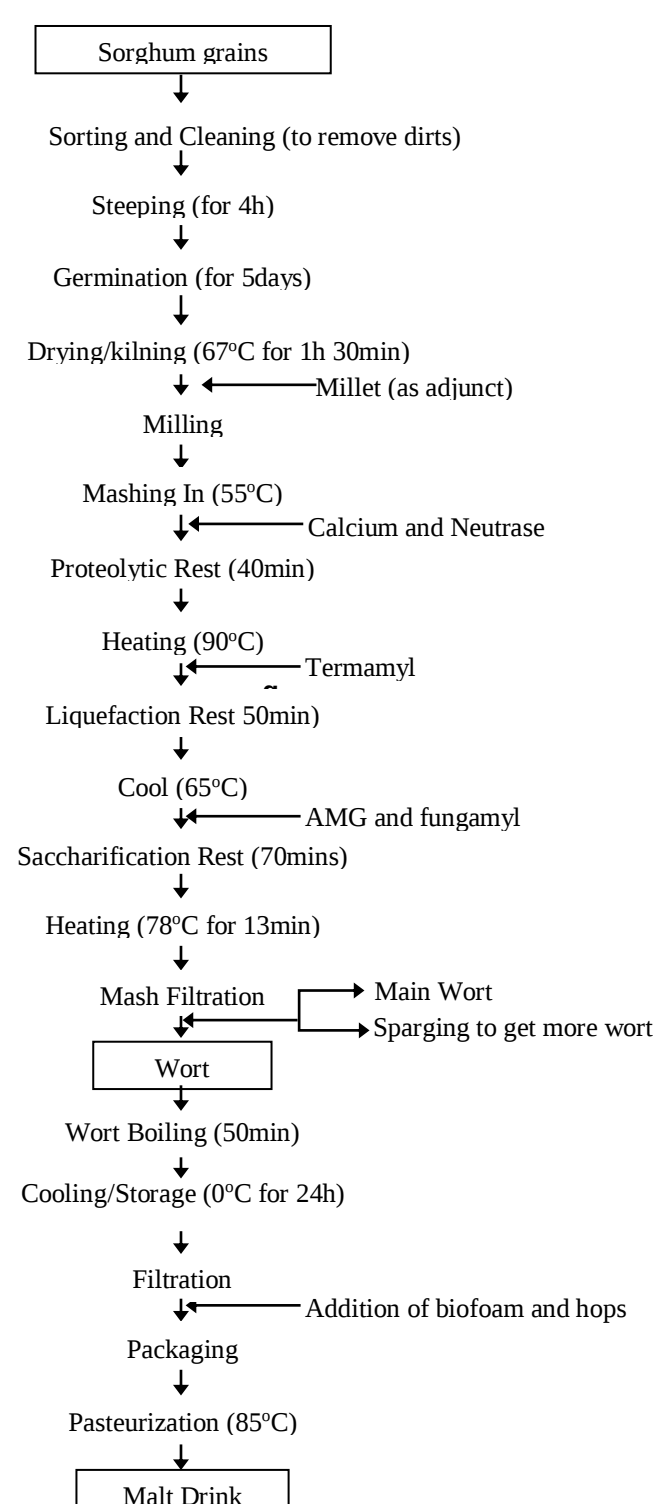
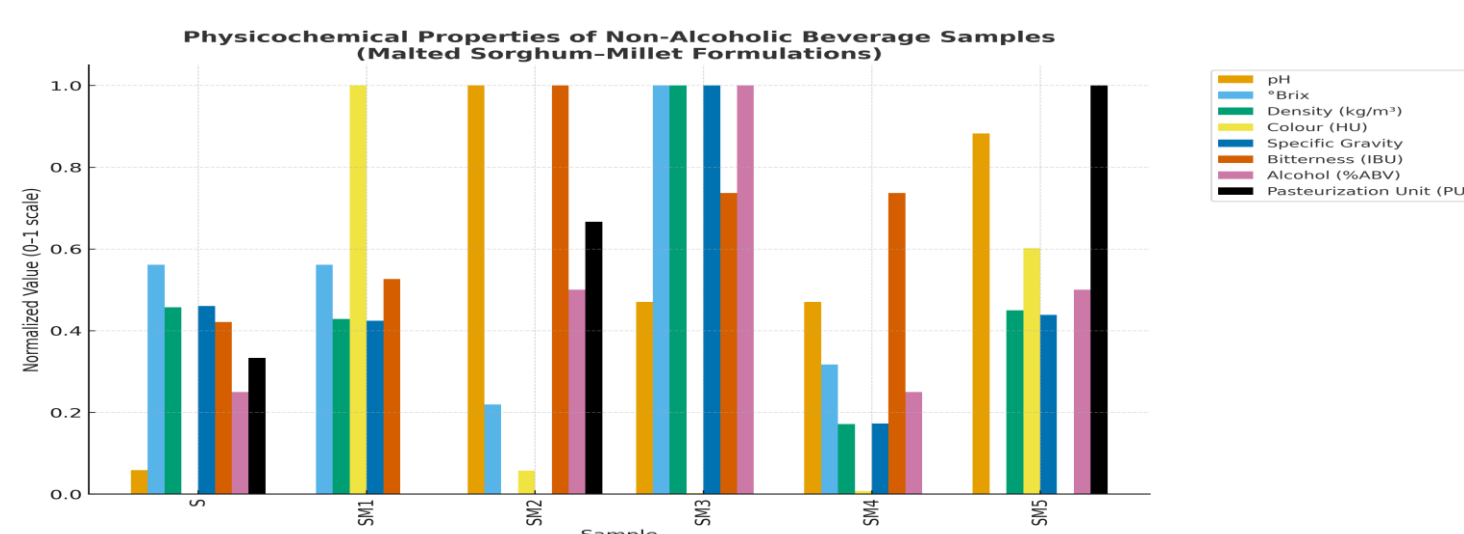


Fig.1: The production of Non-Alcoholic Malt Drink from Malted Sorghum and Millet grist as an adjunct.

RESULTS & DISCUSSION



Significance of Physicochemical Parameters

- Specific Gravity:** Indicates total dissolved extract and body of the beverage.
- Density:** Reflects solute concentration from malt and millet sugars.
- pH:** Shows acidity level; slightly high but still safe for consumption.
- °Brix:** Measures sugar content influencing sweetness and energy value.
- Colour (HU):** Represents product color intensity due to Maillard reactions.
- Bitterness (IBU):** Balances sweetness and enhances overall flavor.
- Pasteurization Unit (PU):** Confirms effective heat treatment for safety.
- Alcohol Content (%ABV):** Very low—qualifies as non-alcoholic beverage.

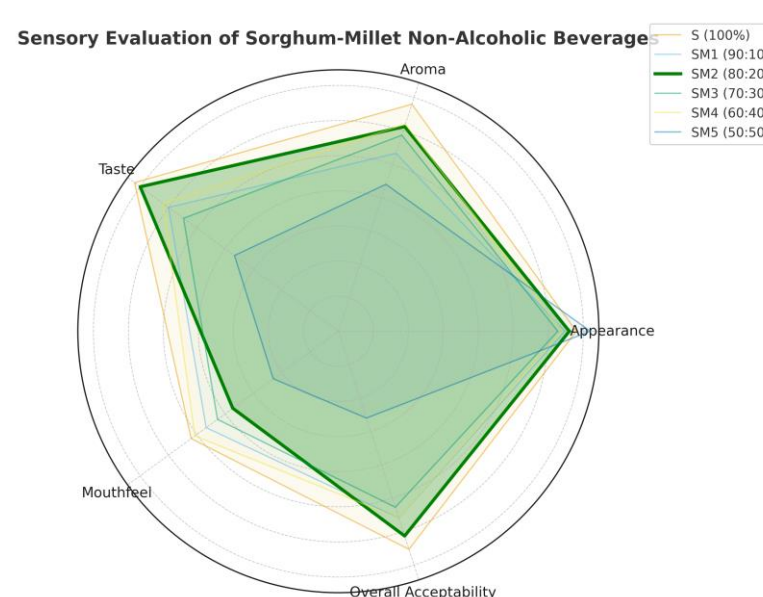


Plate 3: Malt product sample

CONCLUSION

Millet can be effectively used as an adjunct in malted sorghum-based non-alcoholic beverages without compromising product quality, especially at inclusion levels up to 40%.

FUTURE WORK / REFERENCES

Future studies should investigate the shelf-life stability, nutrient bioavailability, and consumer perception of sorghum-millet beverages under different storage and processing conditions.

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