



Boba-Licious

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ABSTRACT

The purpose of the study was to create a new and innovative healthy drink for children ages ranging from ten to fifteen and also to formulate a product that has a positive effect in health by decreasing the risk of Non-Communicable Diseases (NCDs) for the kids, who would be the main consumer. In this experiment, a healthy and nutrient dense mango boba flavored carbonated drink was formulated based on the USDA Smart Snacks for Kids Guideline, which suggest low sugar calories, gluten-free, and high nutrients. The drink was developed using Recipal Software and will be tested using the 5 – point hedonic scale to see if it is going to be accepted by children. The attributes of color, texture, flavor, and the aroma of the product will be observed during the test. It is expected that 80-90% of children would like and accept the Boba-Licious drink. This product will be another healthy option and easily accessible for kids.

INTRODUCTION

When the Boba-Licious carbonated drink was created, it was found that it is high in nutritional value. This means that the conceptualized drink is high in vitamins A and C.

METHODS

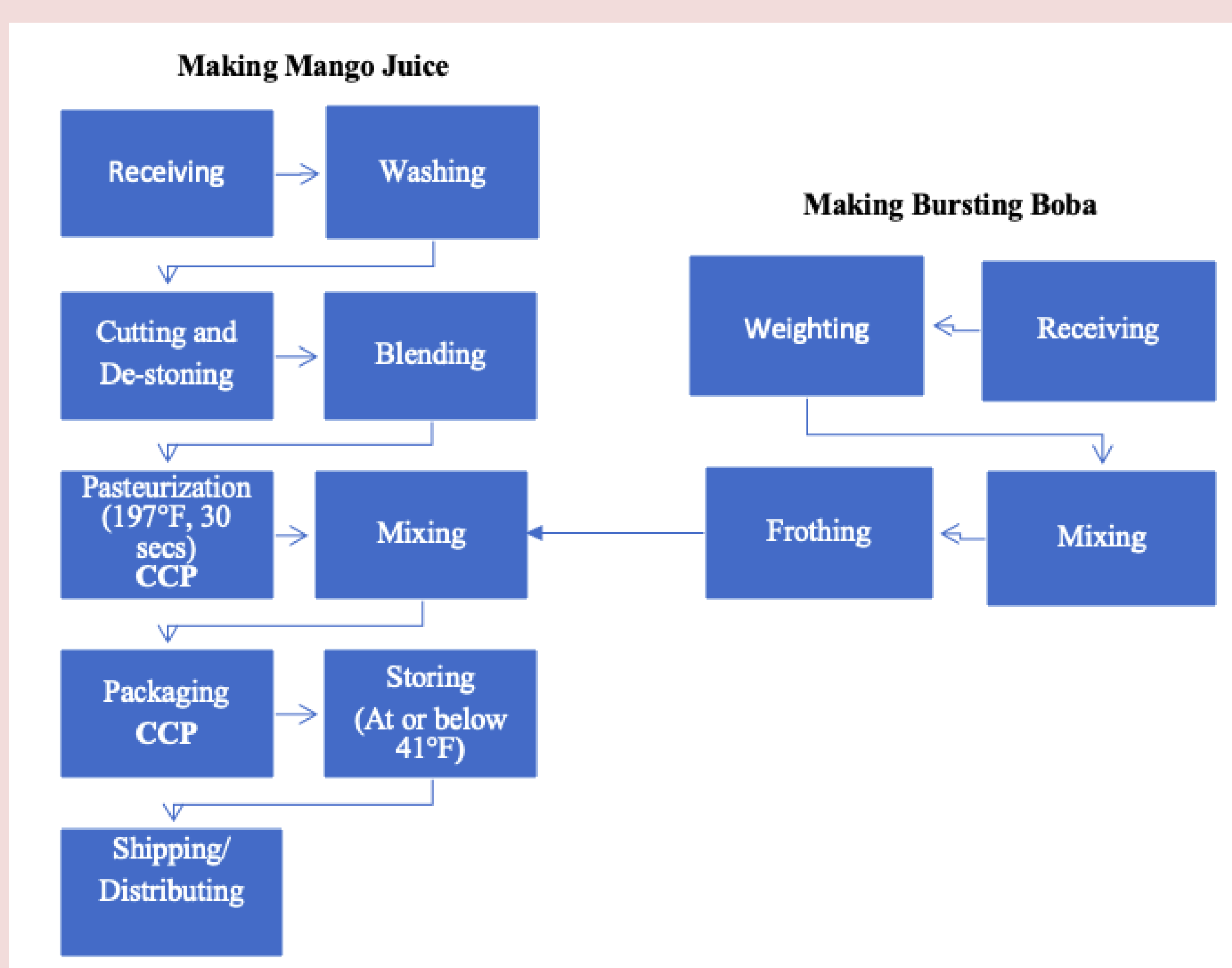


Figure 4: Process Flow Diagram for Boba-Licious



Figure 2: Product Sensory Test for Boba-Licious

RESULTS

Boba-Licious is a zero added sugar and low-calorie drink. One serving of the conceptualized product contains 130 calories. Unfortunately, due to Covid-19 we were not able to conduct the hedonics sensory analysis, but it is predicted that children ages ten to fifteen will enjoy the product better because of the curiosity of boba. The importance of this product is that it will not negatively affect the health in relation to increased risk of NCDs for children who are the main consumers.



Figure 1: Boba-Licious

Table 3: Product Formulation

Ingredient	Amount	Percentage of Ingredients (%)	Functionality of Ingredient
Carbonated Water	141 grams	42%	Volume and Carbonation
Organic Mango Puree	107 grams	31%	Flavor and Taste
Organic Orange Juice	50 grams	15%	Enhance flavor and Shelf Life
Burstable Mango Boba	42 grams	12%	Texture
Total	340 grams	100%	N/A

Table 2: HACCP Summary

Control points	Classification of Hazards	Critical Limit	Corrective Action	Verification	Records
Pasteurizing	Biological	197°F 30 secs	Send it to laboratory for inspection	Record review	Yes
Packaging	Physical	No leakage or damage	Discard if any damages are found on bottles	Record review	Yes

Boba-licious

Nutrition Facts
1 serving per container
Serving size 1 (355mL)

Amount Per Serving
Calories 130

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 34g	12%
Dietary Fiber 1g	4%
Total Sugars 30g	
Includes 0g Added Sugars	0%
Protein 1g	
Vitamin D 0mcg	0%
Calcium 90mg	8%
Iron 0.6mg	4%
Potassium 110mg	2%
Vitamin A 360mcg	40%
Vitamin C 44mg	50%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Ingredients: Carbonated Water, Organic Mango Puree, Organic Orange Juice, Organic Burstable Mango Boba (water, organic boba-licious mango juice, calcium lactate, citric acid, seaweed extract, xanthan gum)

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Figure 3: Nutritional Facts Panel for Boba-Licious

DISCUSSION

In essence, Boba-Licious is a healthier alternative in the beverage market due to a variety of reasons. As shown in figure 3, the drink is high in fiber, vitamins A and C, consists of organic fruits, and does not contain added sugars. Additionally, it has a positive effect in health by decreasing the risk of NCDs. Moreover, Boba-Licious is an environmentally friendly drink as it is packaged in a sustainable bottle made from Polylactide Acid (PLA) plastic which is a compostable, biodegradable thermoplastic made from renewable sources (Jamshidian, M., Arab Tehrany, E., Imran, M., Jacquot, M., & Desobry, S. 2010). Furthermore, in the making of Boba-Licious, any food waste gathered is decomposed. Along with that, to protect the taste and flavor of the drink, it is stored in a refrigerator below 41° F that is ran by solar panels. Refrigeration helps with the shelf life of approximately 4 months. Typically, the shelf life is found using the accelerated shelf life (ASL) equation, however, a commercialized juice was used to find the shelf life. Overall, Boba-Licious is environmentally friendly and safe for consumers.

CONCLUSION

Boba-Licious is a brand new healthy, enjoyable and sustainable drink for kids. The main functionality is the burstable boba which is available in a to-go bottle and ready to consume. Boba-Licious is innovative for children who will enjoy its favor and nutritional values.

ACKNOWLEDGEMENT

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