

**FSHN 381**  
**NEW Recipe Form**

**Project:** Fruit & Vegetable Patty Experiment

**Date:** Dec. 07, 2010

**Group Members:** Kara Yamada, Kristi Kakiuchi, Dyan Bautista

**Recipe Name:** Azuki Bean Fruit & Vegetable Patty

**Serving Size (g):** 170

**Number of Servings:** 3

**Serving Size (cup, tsp, etc):** 2 (3 ounce) patties

**Ingredients List:**

Ingredient	Weight (grams)	Household Measurement (cup, tsp, etc)
Cooked Azuki beans	270	1 ½ cups
Water	43.8	3 ½ Tbs.
Peeled & chopped Fuji apples	139.8	¾ cup + 3 Tbs.
Chopped celery	24	3 Tbs.
Grated carrots	40.8	3/8 cup
Cornstarch	37.2	3 Tbs. + 2 ¼ tsp.
Soy flour	32.4	4 Tbs.
Curry powder	6	1 Tbs. + ¾ tsp.
Ground cumin	1.8	1 tsp.
Table salt	1.8	¼ tsp.
Dried chopped onions	22.8	2 Tbs. + 2 ¼ tsp.
Canola oil	10.8	1 Tbs.

## **Procedure:**

### Azuki Bean Preparation:

1. The day before making the fruit and vegetable patties, rinse  $\frac{3}{4}$  cup dried Azuki beans in a medium sized bowl
2. Add the rinsed  $\frac{3}{4}$  cup azuki beans and add enough tap water to make a 2 inch layer above the beans.
3. Cover the bowl with saran wrap and place in the refrigerator, soaking beans for about 22 hours.
4. After 22 hours of soaking Azuki beans, drain the water and rinse beans thoroughly with water.
5. To cook the beans, simmer in a medium sized pot with water for approximately 30 minutes or until a desired texture.
6. Immediately drain and rinse the beans with cold water and set aside.

### Patty Preparation:

1. Rinse the fruits and vegetables (apples, celery, and carrots.)
2. Peel and dice apples and celery.
3. Peel carrots and grate finely.
4. Using a food processor, pulse  $1\frac{1}{2}$  cups of cooked Azuki beans and water together 8 times or until minced.
5. In a medium sized bowl, mix beans, apples, celery, and carrots together.
6. Mix in 2 Tbs. and  $2\frac{1}{4}$  tsp. cornstarch, 3 Tbs. soy flour, and spices.
7. Form the mixture into 6 patties by hand, making patties about  $\frac{1}{2}$  inch thick.
8. Mix 1 Tbs. cornstarch and 1Tbs. soy flour together to make a flour coating mix and lightly coat each patty with the four mix.
9. Cover patties with a wet paper towel and microwave for 2 minutes on high to achieve an internal temperature of  $110^{\circ}\text{F}$ .
10. Coat a frying pan with 1 Tbs. of canola oil then pan-fry patties on medium-low heat for 5 minutes or until golden brown on each side.
11. Serve patties hot.

## **Sensory Evaluation Results:**

The Azuki bean, fruit, and vegetable patties were evaluated by 18 participants: 11 senior citizens, 2 staff members of Kahala Nui, a nutritionist, the professor of FSHN 381, and his 3 teaching assistants. The participants were asked to rate the azuki bean fruit and vegetable patty based on appearance, aroma, texture, taste, and overall acceptability. In addition, they were asked to include how often they would consume the patty. The sensory evaluation results indicated that the azuki bean fruit and vegetable patty had an acceptable aroma and taste, but an appearance and texture that needed improvement as

the majority of the participants voted for an acceptability of “like” or “extremely like” for the aroma (66%), taste (61%), appearance (50%), texture (50%), and overall acceptability (50%). The consumption frequency for the azuki bean patty was that the participants would eat it occasionally and only improve their fruit and vegetable daily intake.

### **Any other comments:**

Sensory evaluation participants commented that the patty was too dry and had a too strong cumin and curry flavor. Some suggestions were to cook the beans longer and decrease the amount of spices used.

### **Nutritional Information:**

The Azuki bean fruit and vegetable patty has 240 calories for one serving. It has a total of 4 grams from fat, with 0 grams from both saturated and trans fat. One serving of the patty contains 240 mg of sodium, 9 grams for both dietary fiber and sugar, and 10 grams from protein. The azuki bean patty also contains a high amount of vitamin A, 30% of the daily value.

# Nutrition Facts

Serving Size (170g)

Servings Per Container

Amount Per Serving

**Calories** 240    **Calories from Fat** 35

% Daily Value\*

**Total Fat** 4g                      **6%**

Saturated Fat 0g                      **0%**

**Trans Fat** 0 g                      **0%**

**Cholesterol** 0mg                      **0%**

**Sodium** 240mg                      **10%**

**Total Carbohydrate** 42g                      **14%**

Dietary Fiber 9g                      **38%**

Sugars 9g

**Protein** 10g

Vitamin A 30%    •    Vitamin C 15%

Calcium 8%        •    Iron 15%