



## **2015 4-H Food Product Development Contest**

**Submitted By Coffee County**

### **Team Members:**

**Alisa Arnold, Kayla Tatum,  
Linda Aycok, and Ruth Day**



## PRODUCT DESCRIPTION

### **Ninja Chips Description:**

Ninja Chips are crunchy, flavorful chips with a delectable, dried fruit topping designed to be a healthy alternative snack to help achieve your daily fruit needs. Ninja Chips are made of Ninja Dough that is infused with fruit flavors. They are then topped with fresh fruit that has been naturally dried to maintain the crispy texture of the chip. Ninja Chips are the perfect snack food. They provide nutrition and sweetness in the form of a chip. Ninja Chips come in a variety bag with five different flavors. Our fantastic flavors are strawberry, apple, pineapple, kiwi, and banana. Ninja Chips are designed for children and health conscious people. There is nothing like Ninja Chips on the market. They are a sweet, crunchy snack that are delicious and actually good for you. Ninja Chips will be The Healthy Snack in the cupboard and the only snack that will satisfy your hunger while providing the benefits of eating fruit. They would be a great addition to any meal, or as a health conscious grab and go snack.

### **Product Name and Logo:**

The Ninja Chip slogan is stealthily healthy. Stealthily healthy relates to our Ninja theme because our chips are so delicious you won't believe how healthy they are. The Ninja is also a marketable quality that will appeal to our top target markets. The Ninja will show a fun playful side to our child market, and a fitness side to our healthy eating market. The colorful fruit in the logo serves two purposes. It shows our consumer what fruits are used on Ninja Chips, and it's also colorful and fun to attract the attention of our target markets.



## FORMULA

### Ninja Chip Dough

2 C flour  
1/2 tsp. salt  
1 egg  
1/3 C + 1/8 C pineapple juice

### Strawberry Chip

Ninja Chip dough triangle  
1/2 tsp. light strawberry yogurt  
2 slices chopped dried strawberries

### Banana Chip

Ninja Chip dough triangle  
1/2 tsp. light vanilla yogurt  
2 slices chopped dried bananas

### Apple Chip

Ninja Chip dough triangle  
1/2 tsp. light vanilla yogurt  
1 slice chopped dried  
golden delicious apple

### Kiwi Chip

Ninja Chip dough triangle  
1/2 tsp. strawberry kiwi yogurt  
1 slice chopped dried kiwi

### Pineapple Chip

Ninja Chip dough triangle  
1/2 tsp. light vanilla yogurt  
1 slice dried chopped pineapple

### Fruit Preparation:

Fresh fruit is first cut into thin slices, and dehydrated until all moisture is removed. The dehydration process dries the fruit, so the chip will keep its crunchy texture. After the fruit is dried it is then cut into very small pieces, so every bite will contain fruit.

### Ninja Dough:

To make our signature Ninja Chip dough, you first measure the flour and salt and put them into a large bowl. Then crack the egg into a separate bowl, and measure 1/3 cup of pineapple juice and add it to the egg. Mix these two ingredients together and then add to the flour. Mix until a soft dough forms adding the 1/8 of a cup of pineapple juice as needed. Then knead until smooth. Cover the dough with a damp towel and let rest on the table for 10 minutes. The flour and egg are a base for the dough. The salt adds flavor and some preservative properties to our dough. The pineapple juice is used to provide flavor, and to be the combining agent for our dough. Once the dough has rested it is then pressed flat with a dough roller to make the chip extremely thin. This helps us achieve the crispy chip texture. The dough is then cut into 2.25 in. x 2.25 in. x 3 in. triangles.

### Baking , Assembly, & Packaging:

The chips are then put on a greased perforated pan which also makes the chips crispier. Then a very thin layer of yogurt is applied to the chips. As you can see above, the chips require different flavors of yogurt depending on the flavor of the chip. The purpose of this is to add specific flavors to each chip. The chips are baked at 350 degrees Fahrenheit for 4 minutes. The chips are turned over and placed back in the oven for 2 minutes. The chips are removed from the oven, and a small amount of yogurt is applied to the other side to act as a glue for the dried fruit. Depending on which flavor chip 1 or 2 pieces of dried fruit is chopped, and then applied to the top of the chip. The fruit adds flavor and important nutritional qualities. The chips are then allowed to cool completely. Then they are packaged, and the bag is filled with a small amount of nitrogen which acts as a preservative until the chips are opened.



## TARGET MARKET

Ninja Chip's main target market will be children ages 3-12. These children are pre-elementary and elementary aged, middle class boys and girls. Ninja Chips were specifically designed to reach children. Our product reaches a niche that few companies pursue. There are very few healthy snack foods that specifically target children, but our product is perfect for children because we have taken healthy fruit, and made it into a snack food that is sweet, fun, and delicious. Kids love the taste, and they won't even realize that they are eating healthy food hence our slogan, stealthily healthy. Ninja Chips are designed to appeal to children. Our packaging was designed with bright colors that will catch their eye. Next they will see our cool Ninja Chip ninja; and our fun, colorful, and happy fruit logo. Ninja Chips are a great product for children because they are a tasty, healthy snack food that will provide them with nutrition that they need. According to a U.S. Department of Health and Human Services study, fewer than 15% of elementary school-aged children eat the recommended amount of five or more servings of fruit and vegetables daily. That means four out of five children in the U.S. are not getting the nutrition they need! Ninja Chips will be a great option for children to get more of the fruit that they need, and it's a food that they will want to eat!

Marketers have done extensive research and have come to find that children have a great amount of purchasing influence which marketers call the "nag factor". Development of brand relationships is known to start in early childhood. This is another reason we want to target children. We want lifelong customers. In the process of reaching children, parents will be able to learn about how healthy and great our product is for children. Parents are always looking for ways to get their children to eat healthier. Ninja Chips fill this need. Snack time is the easiest time to pick up unhealthy snacks that add extra calories, sugar, sodium, and fat to the diet. Ninja Chips are an excellent alternative. Instead of adding all those unnecessary calories, they provide nutrition in a yummy snack that kids will love. Parents will no longer have to force healthy foods into their children because they will be begging for the naturally sweet and nutritious Ninja Chips. Parents will love them because of how good they are for their children, and they won't be able to resist sneaking a bite too.

Ninja Chips has mass appeal to not only to children but also to the health conscious person and dieters because Ninja Chips are truly healthy. The nutritional facts back this up. For example, Ninja Chips contain 80 calories per serving which is 20 calories less than the 100 calorie snacks that specifically target dieters and the health conscious. The 100 calorie snacks may have better calorie counts than traditional snacks but they still contain high amounts of sugar and fats. Compared to these snacks Ninja chips contain 20% less fat and 25% less sodium. Ninja Chips also contain no high fructose corn syrup, but they do contain vitamins A, C, and D, folate, calcium, and potassium. The Ninja Chips logo has a healthy appearance with its brightly colored fruit. It also tells people right away that Ninja Chips are healthy, and it implies that you can't be a good ninja without being healthy and fit.

Ninja Chips are THE perfect snack for both children and the health conscious.



## MARKETING PLAN

### Target Market:

- Children ages 3-12
- Health Conscious or Dieters

### Slogan:

- Ninja Chips, they're stealthily healthy!

These fruit topped chips are a great alternative to all the salty and fattening chips on the market. They are the perfect snack to help you reach your daily fruit needs.

### Packaging:

- Our packaging is designed to attract the attention of kids.
- Our packaging will have a 2D barcode that will take them to our application.

### Commercials:

- We have two commercials; one that appeals to children and one that is directed to our healthy conscious market. TV is the number one way to reach the child market.

### Radio:

- We have a radio commercial. Radio is a great way to spread awareness about our products.

### Internet/ Mobile devices

- Our website is <http://ninjachips.webstarts.com/index.html>. This is where we inform people about our product, and our brand. Purchasers will be able to visit a special section of our site to buy Ninja Chips in bulk. We will also offer coupons and be able to advertise special future deals. Our website will be kid friendly and they will be able to play games with our healthy Ninja Chip ninja.
- We are creating a fun application that children can use to play games and will promote our product.
- We will have a Facebook page and Twitter account, Both these avenues have become a great way for companies to advertise. We will be able to tell our customers more about our products, and new things to come from our company. Customers will be able to like our Facebook page and leave comments which other friends can see who may have never heard of our product before. It will also serve as a way to hear how we can improve our products and what the customers like or don't like.
- We also plan to have internet ads which will help spread the news about our new product.

### Billboards or Signs:

- We plan to have billboards or large signs advertising Ninja Chips. These signs will have our 2D barcode which smart phone users will be able to scan and find out more information about our product including a list of stores where they can be purchased.



## MARKETING PLAN

### Magazines:

- Ninja Chips will be a great product for magazine ads. They will be great in any food, health, or parenting magazines. These ads will also include our 2D barcode and coupons. This will be a great way to advertise to our adult target markets.

### Promotional Booths:

- We plan to set up promotional booths at health fairs and conventions to promote how healthy Ninja Chips are, and to expand our customer base. During this time we can pass out samples and surveys to get customer feedback. This is also a great time to network with customers, and promote the Ninja Chip brand.

### Schools:

- Ninja Chips are a healthy product that we would like to market to schools. Ninja Chips meet the USDA's standards for snacks in schools by containing at least a 1/4 cup of fruit in each serving. Ninja Chips also meet the calorie, sodium, sugar, and fat requirements. Serving Ninja Chips in school would be a great way for us to reach our child market.

### Stores:

#### Convenience Stores:

- Large and small bags of Ninja Chips will be available in convenience stores for our customer's on-the-go needs.

#### Vending Machines:

- Ninja Chips will be one of the healthiest snacks available in vending machines.

#### Grocery Stores:

- Ninja Chips will be sold in grocery stores in the chip aisle. For the introduction of our chips to grocery stores we will have a special display.

### Store Display:





## PACKAGE DESIGN

Ninja Chips will be sold in single-serving and multiple-serving size foil bags. A foil bag is used to keep out light and air to help preserve the chips freshness and crunch for long periods of time. Both large and small chip bags will be filled with a small amount of nitrogen. Nitrogen preserves the freshness of the chips, and acts as a cushion during shipping.

The package is designed with light but bold, eye-catching colors to promote that it is a healthy product. We also displayed the chips on the bag so the customers know what they are purchasing.

The single-serving bag will be sold in convenience stores and vending machines for \$1.00.

The large multiple-serving bag will be sold in grocery stores for \$3.98

Front

Back





## STORAGE

Ninja Chips should be stored at room temperature in their sealed chip bag. As long as the bag remains sealed Ninja Chips can last up to a year on the shelf. Once the bag is opened we recommend that the bag be refolded for storage to keep as much air out as possible, and placed in a dry room temperature environment like a pantry or kitchen cupboard. Ninja chips will remain fresh for about a week as long as the bag is tightly refolded after it is opened.

## SAFETY

Our number one priority for creating a healthy snack is safety. In the Ninja Factory, we strive for cleanliness. We require proper hand-washing, food-handling, and sanitation procedures.

### Facilities:

The Ninja Chip factory was designed to promote a safe and healthy environment. Our offices are at the entrance of the Ninja Chip factory. Along with staff bathrooms, a locker room, a break room, a chemical closet, and a ready room. The staff bathrooms are kept as far away from the food production as possible to prevent the spread of germs. The locker room is where staff can store their personal items, including clothing and shoes that are not worn for work. The first aid kit is also kept in the locker room. The break room is a clean environment where our employees can rest and eat lunch. The chemical closet is where all our cleaning supplies are kept along with the MSDS (material safety data sheets) book. The ready room is a small room that separates the front of the factory from the food processing section. The ready room is where employees prepare to enter the food processing room. In this room the employee will put on a hair net, and a clean apron. This room is equipped with hand washing stations and gloves. The ready room also has a place to hang aprons when an employee leaves the food processing area. There is also a shoot for dirty aprons to be discarded in. When the employee leaves this room to enter the food processing section they are clean and ready to work.

The food processing section includes a fruit prep station, a large dehydrator, a dry temperature controlled room, a walk-in refrigerator, a dough and assembly station, ovens, packaging, dish washing station, hand washing stations with an MSDS book, and a shipping prep room. The fruit prep station is where the fruit is thoroughly washed. Then it is sliced so that it can go to the next station, the dehydrator. Once the fruit is dehydrated it is stored in the dry temperature controlled room. The temperature of this room is monitored and recorded daily. The walk-in refrigerator is kept below 40 degrees Fahrenheit to prevent food borne illnesses. Our refrigeration is monitored with thermometers and a daily log is kept of its temperature. The dough and assembly station is where the Ninja dough is made, cut, and prepared for the oven. This station is cleaned between every batch of chips. The ovens are where our chips are cooked. The chips are then cooled, packaged, and sent to another room to be boxed for shipping. All doors that enter the food processing section are equipped with blowers to prevent pests from entering.



## SAFETY

### **Cleaning:**

Cleaning procedures keep both our product safe and our employees safe. At the beginning of the day all food prepping areas are washed, rinsed, and sanitized before production begins. Our employees are taught to clean as they go, and not to leave messes till the end of the work day. They are also taught about which chemicals to use where, and they know where the MSDS books are kept in case of an accident. Large cleaning jobs are done on a scheduled basis or as needed. For example, we clean the refrigerator once a week. At the end of the shift all dishes are washed, work stations are cleaned, and floors are swept and mopped. The bathrooms and all employee areas are cleaned and also swept and mopped. Separate cleaning supplies are used for the bathrooms to prevent contamination of the food processing area.

### **Hygiene & Uniforms:**

Our employees are trained about personal hygiene, and what a proper uniform is. Hygiene helps to keep our product safe from contaminants. Our employees are expected to be clean before their shift. They are required to keep their nails cut short, and are not allowed to wear perfume or nail polish as these can contaminate the food. Cuts and sores must be covered with an appropriate waterproof dressing. Smoking and eating is not allowed in the food processing area. Employees are taught to not cough or sneeze over food, and are encouraged to stay home when they are sick. Regular hand washing is required especially after restroom use, coughing or sneezing, eating, and when you change your gloves. Proper hand washing techniques are taught and posted at all hand washing stations.

We also enforce the use of a proper company uniform. Our uniform includes a company polo, black pants, closed-toed shoes, aprons, hair-nets, and gloves. All uniforms should be clean upon arrival to work. Aprons are provided and cleaned in-house to prevent contamination from outside sources. Jewelry is not allowed. This is to protect our product and the employees.

### **Tests and Regulations:**

We have a safety inspector on site that inspects cleanliness and the safety of all equipment. The inspector also makes sure that employees are following cleanliness policies, and are properly trained to keep our product safe. Every batch of Ninja Chips is taste tested to ensure the highest product quality.

### **Product:**

It is very important that all our ingredients are fresh and our fruit is grown pesticide-free with the intention of keeping our customers safe and healthy. We purchase and dry our fruit while it is in-season to ensure the best quality and taste. The fruit is thoroughly washed and quickly dehydrated to prevent spoilage. Once dried the fruit is kept in a dry temperature controlled environment to prevent it from becoming moist which can cause the fruit to spoil and grow bacteria. All the ingredients in the Ninja dough are stored in sealed containers. The yogurt used in our product is kept refrigerated until needed. Our product is baked, assembled, cooled to room temperature, and quickly packaged to provide the freshest and safest product possible. Maintaining safety within our factory is of utmost importance, so that all Ninja Chip customers receive the highest quality product possible.