



# Candied Peel

A potential new product for Tanzania



***SIDO Arusha***

***PO Box 1278***

***Arusha, Tanzania***

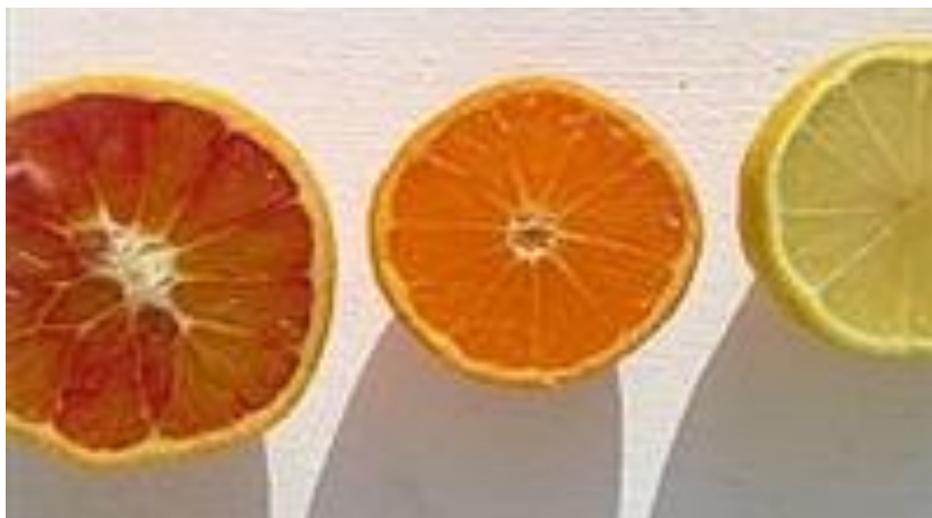
***2010***

## *Introduction*

The very first new food product idea that crossed my mind in Tanzania was Candied Peel. Street vendors peeling oranges in a very artistic way is a common scene in most places in Tanzania. When asked what they do with the peel, I was told that they throw the peel away as waste. What took my fancy is the meticulously cut orange peel, which could be converted into a value added product to be sold in the international market, provided the quality is maintained at an acceptable level.



Candied peel can be produced not only from orange peel but also from many other citrus varieties such as lemon, grapefruit.



Candied citrus peel, such as that made from oranges, lemons or grapefruit, is an easy candy to make. It looks attractive and makes a nice gift. Candied peel is a popular ingredient in fruit cakes and other bakery goods and also in products like breakfast cereal and porridge..

## *Procedure*

Select good quality uniform pieces of peel from the street vendors of peeled oranges. At some stage the vendors will have to be informed of the importance of providing a uniform by-product, which may even fetch a price for them.



Soak the peel in cold water to which some salt is added (a table spoon of salt in a litre of water). Leave for 2-3 hours. Drain the water and rinse well. Then cover the peel with cold water in a stainless steel pot and let the water boil for about 20 minutes. Drain the water and repeat the process with fresh water 3-4 times. This is to minimise the bitterness.

Add sugar and sufficient water to dissolve the sugar and cover the peel.



Heat the mixture while stirring until the mixture boils and comes to soft candy stage. A candy thermometer will help achieve this important end point temperature of the mixture.



Once the rinds are cooked, drain them carefully.

**DON'T STRAIN DOWN YOUR KITCHEN DRAIN! THIS CAN GUM THINGS UP!**



Take drained rinds and drop into sugar. Recommend using a baking sheet with sides for this. A plate will be quite cramped.



Thoroughly coat the peels with sugar. Roll in sugar until a bit cooler, then drop onto paper towels to cool the rest of the way. Store in an airtight container.

These look really nice packaged for gifts These make for a delicious, healthy alternative to most candies for kids and adults alike.



*Product proposed and samples prepared by*

***Dr Anne Perera***

*Food & Nutrition Adviser*

*Volunteer Service Abroad (New Zealand)*

[\*anneperera.nz@gmail.com\*](mailto:anneperera.nz@gmail.com)

[\*www.anneperera.co.nz\*](http://www.anneperera.co.nz)

*+255 (0)762575554*

*SIDO Arusha*

*Tanzania*

*2010*

## Nutritional Value of Candied Peel (per 100g) taken from internet

### General components

- Energy(kcal) 344 kcal
- Energy(kj) 1439 kj
- Water 14 g
- Protein 0.2 g
- Lipid 0.1 g
- Carbohydrate 85.5 g
- Ash 0.2 g

### Minerals

- Sodium 13 mg
- Potassium 8 mg
- Calcium 22 mg
- Magnesium 6 mg
- Phosphorus 3 mg
- Iron 0.3 mg
- Zinc Tr
- Copper 0.01 mg
- Manganese 0.01 mg

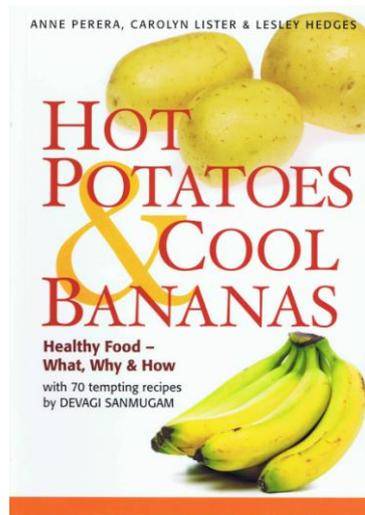
### Vitamins

- Vitamin A(Retinol) (0)
- Vitamin A( $\alpha$ -Carotene) 0  $\mu$ g
- Vitamin A( $\beta$ -Carotene) 4  $\mu$ g
- Vitamin A(Cryptoxanthin) 0  $\mu$ g
- Vitamin A( $\beta$ -Carotene equivalents) 4  $\mu$ g
- Vitamin A(Retinol activity equivalents) Tr
- Vitamin D (0)
- Vitamin E( $\alpha$ -Tocopherols) 0.1 mg
- Vitamin E( $\beta$ -Tocopherols) 0 mg
- Vitamin E( $\gamma$ -Tocopherols) 0 mg
- Vitamin E( $\delta$ -Tocopherols) 0 mg
- Vitamin K(0)
- Vitamin B1(Thiamin) 0 mg
- Vitamin B2(Riboflavin) 0.02 mg
- Vitamin B3(Niacin) Tr
- Vitamin B6(Pyridoxine) 0 mg
- Vitamin B12(Cyanocobalamin) (0)
- Vitamin B9(Folate) 2  $\mu$ g
- Vitamin B5(Pantothenic acid) 0 mg
- Vitamin C Tr

### Dietary fibers

- Dietary fibers(Soluble) 1.3 g
- Dietary fibers(Insoluble) 1.4 g
- Dietary fibers(Total) 2.7 g

Quoted from the following book by Anne Perera *et al* (2007),



**“Hot Potatoes & Cool Bananas”**  
SNP Pub. Singapore 2007 (pages 64/65)

### **The Zest in Zest**

“As any marmalade maker will know, citrus fruits are also a good source of pectin, the substance that causes jam to set. Pectin also has a health benefit of reducing cholesterol, and does this by binding to it, so that rather than being absorbed into the bloodstream, it is simply excreted.”

“Aside from vitamin C, the most plentiful antioxidant in citrus fruits are flavonoids, a group of over 400 compounds. Citrus fruits contain more than 60 of these, most belonging to a subgroup called flavanones, which has several health benefits, including boosting the immune system, protecting against heart disease, reducing the risk of cancer and preventing some eye diseases, such as cataracts. One of the most important flavonoids in citrus is hesperitin. In addition to the activities above, hesperitin works in conjunction with vitamin C, restoring its antioxidative powers after it has quenched a free radicle.”

“for many people oranges symbolise healthy eating, and are particularly recognised as having plenty of vitamin C. This is certainly true. Less well-known are the other valuable phytonutrients in oranges, the highest level of which are in the peel. This is usually thrown away, a waste of many valuable as well as tasty nutrients. Adding the zest (slivers of the coloured part of the peel) of citrus fruits to sauces, dressings, homemade drinks or baking, or whole slices to stews as in Middle Eastern cooking, costs nothing but a little extra time, yet adds nutritional value to the dish.