# The Authentic of 'Keropok Lekor' Process

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### Abstract

This paper attempts to study the authentic of 'Keropok Lekor' making process where this is one of the heritage value that should be preserved and documented. The making process of 'Keropok Lekor' is documented in five main steps which are preparing fish flesh, preparing dough, kneading and rolling, boiling and cooking. The making process was documented in details the traditional and new way of process. The study of this culture will be one of the factors that will be considered in designing spaces for the 'Rumah Lekor Setiu'. The material used and the characteristics of ingredients have been generated the culture of making process.

Keywords: 'Keropok Lekor'; traditional snack of Terengganu; fish fritter or fish sausage which is chewy one.

#### Introduction

In Malaysia every state has their own unique and specialty of traditional food. *Nur Khaizura (2010)* said '*Keropok Lekor*' is one of traditional snacks and a heritage of Terengganu. It is already famous as snacks since before it is commercialized a few decades ago. Until todays, the culture of '*Keropok Lekor*' already spreads around the country. The traditional foods are strongly related with the local ingredients in a local production with using the knowledge of local people. Local gastronomy which is part of cultural heritage becoming one of the most popular forms of tourism and is highly demanded (*Lopez and Martin, 2006*). Traditional foods are an expression of culture, history and lifestyle of local people (*Trichopoulou et al., 2007*). *Wan Nur Nai'mah binti Wan Md. Hatta* 

Terengganu is located in coastal area and it has a longest coastline of Peninsula Malaysia. Due to the geographic condition, farming and fishing was becoming main economic activity for the locals. Most of the local people work as fishermen thus the idea of '*Keropok Lekor*' is invented due to the economic factor. B Jamilah (1983) said basically '*Keropok Lekor*' was called with different term in Kelantan which is '*Keropok Batang*' and '*Keropok Tongkol*' in Pahang. It is using fresh fish as main ingredients and the composition of the ingredients makes the different taste of '*Keropok Lekor*'. In Terengganu and Kelantan they are using fish as main ingredient which is the highest percentage of composition while in Pahang they are using fish as secondary ingredients and sago flour as main ingredient. Omar M (2011) claimed that the originality of the product should be preserved and support by Kuznesof et al. (1997) that product authenticity is one of the most crucial features of traditional local food.

#### Issue

The main issue appointing in this writing is the making process of '*Keropok Lekor*'. The originality of making process is being lost time to time because of high demand and big scale of industry when the manufacturer starts to use modern machine to save time and energy. The traditional way of process is the culture and heritage of Terengganu where people expertise and place is giving contribution to this production (Omar M, 2011).

#### Objectives

The objective of this paper is to record the traditional and most authentic of '*Keropok Lekor*' making process that are commonly being use by the small scale '*Keropok Lekor*' manufacturer in Terengganu. Each steps of making process are identified with its equipment in details. The culture of making process is documented to study the actual space needed for each steps and to preserve the authentic culture.

#### Methodology

The methodology used is visiting the site study by observing 'Keropok Lekor' process and interview the owner of Keropok Lekor Permata Hati and Keropok Lekor Bayu. Some reading has been done to support first hand visit.

#### **Introduction to Ingredients**

The quality of '*Keropok Lekor*' is determined by the type of fish used, the percentage of fish and the freshness of fish. Commonly in '*Keropok Lekor*' production, there are five types of fish used which is *Parang, Tamban, Kerisi, Biji Nangka* and *Selayang*. The fresh fish must be used to make sure the high quality of '*Keropok Lekor*' which means no ice fish will be used in this production. The other ingredients used in the making of '*Keropok* 

*Lekor*' are sago or starch flour, salt, sugar, MSG and ice water. *Jabatan Kemajuan Ikan Malaysia* was prescribes that '*Keropok Lekor*' should have 30 percent fish more than sago flour to have the best taste of '*Keropok Lekor*'. However there are no rules set by the government for the manufacturer to prepare their recipes.

#### **Preparing fish flesh**

To prepare a fish flesh there is a few steps to be done which is cleaning the fish, removing fish bone and minced the fish. The fish will be cleaned outside and inside by removing all the organs properly. In a traditional way, all this activity will be done by a group of women because long period of time will be taken. Fish bone was removed using a sharp knife by slicing the fish meat for both sides of the fish. Next the fish meat will be put in a stone mortar to be smash and becoming a minced fish. In a culinary word, minced fish is known as *Surimi (paste of meat)*.



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During these days, the technique of removing fish bone and mincing the fish is not economical anymore because of demanding of the product. Both steps are done using a machine to save more energy and time because the fish muscle and fish bones will be separated automatically after entering the machine and minced fish is done.

## Preparing dough

*'Keropok Lekor'* dough is prepared by mixing all six types of ingredients. The recipe can be modified based on the manufacturer own recipe but the ratio of fish flesh should be equal or more than sago flour. *Peraturan Makanan Malaysia 1985* is set that the product should have 15 percent of protein or else the product cannot be commercialized outside. All the ingredients will be mixed and kneaded until becoming dough. Dough is perfectly done when it is no longer sticks at the container and hands. This process can be done using a hand or a mixer. Mixing dough using hands will takes about 30-40 minutes time because to make sure all the ingredients will properly mixed together by adding the ingredients a little by little in each time. However all ingredients can be mixed together in one time if using a mixer and will be set in a medium speed for about 20 minutes or until a uniform ingredients happened (B. Jamilah, 1983).

#### Rolling

Before rolling process take place, the perfect dough are divided and shaped into a smaller ball to have a 200 gram per ball. This is to make sure every each of cylinder shape of '*Keropok Lekor*' will become a same size and perfectly compact. Usually the diameter of '*Keropok Lekor*' is 2cm with 5cm long. The rolling method can be done while sitting on a timber decking or in standing position using both hands. The rolled *Keropok* dough will be arranged on a timber plate in front of boiler while waiting for the water to reach 100 degree Celsius. The rolled dough will be long lasting for only one hour in room temperature before boiling or cooking. Shaping machine has been created in today, however most of the manufacturer still preserving rolling process using hands. The physical character of shaping in traditional way and using a machine have a big different. The crumple shape using hands will give more sentimental value.

#### Boiling

Boiling method is done using boiled water with 100 degree Celsius. It is done to make sure the freshness of the fish unspoiled and for long lasting of '*Keropok Lekor*'. The rolled '*keropok*' dough will be immersing in the boiler pot in one time for about 25 minutes to make sure that '*Keropok Lekor*' will finish at the same time however the shorter time of boiling can be achieved by reducing the thickness of '*Keropok Lekor*' (B. Jamilah, 1983). '*Keropok Lekor*' will be floating on the water after boiling is done.

Steaming method is rarely used because 2 to 3 times more needed than boiling method to finish. To make sure the starch in dough gelatinized, a sharp object are needed to check inside the dough. The best quality of fish must be used when using steaming method because of the longer time to cook. Both methods are done using firewood until today because it will give a good taste and a good aroma to the '*Keropok Lekor*'. Furthermore firewood can be used in a long period because of its ember and it is cheaper than gas stove. The location of rolling process and boiling pot is connected to give faster process of boiling and to reduce the movement of workers.

#### **Deep frying**

Deep frying method can be done either after rolling process or after boiling process. At the hawker stall, deep frying method will be done immediately after rolling and skip boiling because it will give the best taste than the other one. Deep frying method is used to make sure '*Keropok Lekor*' will be softly cooked inside and crunchy outside. Yusof K(2012) claimed that the oil used for deep frying should be use twice maximum for safe consumption. This process is done in standing position to review the frying for safety because it is dealing with hot oil.

#### **Discussion and Conclusion**

The making process of '*Keropok Lekor*' has a few authentic techniques that can be preserved and should not be done using machines. Cleaning fish is one of the values in '*Keropok Lekor*' process because it will be perfectly done by the human sense. There is no machine designed for this step because it needs the touchiness and cautiousness of the human.

Kneading process can be one of the authentic values when a lot of energy is needed to produce the perfect dough. The textures of dough using hands has much more rough than using a mixer because the mixer will makes the dough too flaccid. The authentic of kneading process will gives more taste of fish in '*Keropok Lekor*'.

The traditional way of rolling process using hands should be preserved even though there is a rolling machine created. This is one of the interesting cultures that can be promoted to the outside. The originality of rolling steps happens in sitting position on a timber decking with small rolling table. The rolling table is used for rolling activity and arranging the rolled dough.

Since before '*Keropok Lekor*' has been commercialized, firewood was used for boiling process because of the cheapest price. The aroma of firewood gives the smoke taste to the '*Keropok Lekor*' which is more accentuating the '*Keropok Lekor*' tastes. The using of firewood is one of the cultures and the authentic step that shows the sense of place where most of the food production today has left the usage of this traditional stove.

As a conclusion, the making process of '*Keropok Lekor*' can be classified as a culture of Terengganu because it is the way of local people live and using local materials. Preparation of food is a cultural act (Massimo Montanari, 2006). Cultural act can be preserve by preparing a space by considering every each of steps and this will encourage peoples to use the authentic technique. However in the preparation of '*Keropok Lekor*', some of the technique can be preserved and some do not suitable in these days because of demands and the way of live. The flow of the process is connected to each other so that the space should be design in a continuity way and sequential order for each steps. The preparation of food is studied to prepare a better quality of space making in designing.

### **Reference or Bibliography**

Omar, M., dll. (2011), Sustaining Traditional Food: Consumers' Perceptions on Physical Characteristics of *Keropok Lekor* or Fish Snack. International Food Research Journal. Department of Food Service Management. Publisher: Universiti Putra Malaysia, Serdang.

B. Jamilah (1983), *Keropok Lekor* - Boiling and Steaming Methods of Processing. Pertanika Jurnal. Fakulti Sains dan Teknologi Makanan. Publisher: Universiti Pertanian Malaysia, Serdang.

Yusof Kamisah.dll (2012). Deep fried *Keropok Lekor* Increase Oxidation instability in Cooking Oils. Department of Pharmacology, Faculty of Medicine, UKM. Publisher: Universiti Kebangsaan Malaysia.

Nor Khaizura M.A.R dll (2010). Quantification of Coliform and Escherichia coli in *Keropok Lekor* (Malaysian Fish Product) during Processing. Journal of Applied Science and Research. Department of Food Science, Universiti Putra Malaysia, Serdang. Publisher: INSInet Publication.

Massimo Montanari (2006). Food is Culture. Publisher: Columbia University Press

MJ. Sukri (2009). Prototaip Restoran Francais bagi Industri Keropok Terengganu. Thesis UTM (NA 2750S85) Sarjana Muda Senibina. Fakulti Alam Bina, Universiti Teknologi Malaysia.

O. Nurul Murni (2008). Aplikasi Tahap Penggunaan Teknologi dalam pembuatan *Keropok Lekor*. Thesis Utm (XX 788493.1) Sarjana Muda Pendidikan (Kemahiran Hidup). Fakulti Pendidikan, Universiti Teknologi Malaysia.

Jabatan Perikanan Malaysia

Lembaga Kemajuan Ikan Malaysia

Peraturan Makanan Malaysia 1985

Encik Nazri, assistant manager of Persatuan Nelayan Kawasan Setiu (PNKS)

Puan Azizah, the owner of Keropok Permata Hati, Setiu

Encik Awang, the owner of Keropok Bayu, Merang Setiu Encik Mazlan, Persatuan Nelayan Kawasan Marang (PNKM)



Picture 2: Tamban fish





Picture 4: Biji Nangka fish





Bil	Ingredieants	Percentage
1	Fish flesh	100
2	Sago / starch flour	70
3	Salt	2.5
4	Sugar	1.5
5	Monosodium Glutumate (MSG)	0.3
6	Ice water	20 - 30

Table 1: Recipe of Keropok Lekor(Jabatan Perikanan Malaysia)





Diagram 1: Traditional steps

Minced fish

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Diagram 2: Machine step

Picture 6: Machine



Picture 8: Kneading using hands



Picture 10 Rolling in sitting position.



Picture 12: Boiled 'Keropok Lekor'.



Picture 9: Kneading using mixer



Picture 11 Rolling in standing position.



Picture 13: Boiling using firewood.



Diagram 4: The making process of 'Keropok Lekor'.

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