



FISH BASED RECIPES





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Fish Recipes development by **Lilongwe University of Agriculture and Natural Resources** in collaboration with **WorldFish**





Table of Contents

FOREWORD	7
ACKNOWLEDGEMENTS	8
BACKGROUND	9
INTRODUCTION	10
MEASUREMENTS	11
PROCESSING FISH POWDER	12
1. Fish-Based Porridges	13
i. Sorghum and parboiled Usipa Porridge	14
ii. Millet and parboiled Usipa Porridge	15
iii. Maize, Soy bean and parboiled Usipa Porridge	16
iv. Orange fleshed sweet potato and parboiled Usipa porridge	17
v. Maize, parboiled Usipa and Vegetable Porridge	18
vi. Cassava, soy bean and parboiled Usipa fish porridge	19

2.	Fis	h Based Snacks and Relish	20
	i.	Dry Kampango Balls	21
	ii.	Fresh Usipa Fish Sausage	22
	iii.	Fresh Usipa Fish Balls	23
	iv.	Parboiled Usipa fish Biscuit	24
	٧.	Kanyenya Wa Utaka	25
	vi.	Parboiled Usipa and Eggplants	26
	vii	Orange fleshed Sweet Potatoes & Parboiled Usipa fish Scones	27
	viii	i. Orange fleshed Sweet Potato & parboiled Usipa fish Doughnuts	28
	ix.	Fish Chutney	29
	Χ.	Fish Powder Spice	30

FOREWORD

Appropriate and adequate dietary intake for pregnant and lactating women and also infants and young children is critical for optimal child growth and development. It is known that the nutritional status of children is closely linked to that of their mothers, appropriate infant and young child feeding (IYCF) begins with ensuring optimal health and nutrition among women throughout all stages of life. Recommended IYCF practices include

- early initiation of breastfeeding within one hour of birth;
- breastfeeding exclusively for the first six months of life;
- introduction of adequate, safe and proper semisolid and solid foods at six months of age;
- continued breastfeeding up to and beyond 2 years of age.

The frequency, quantity and quality of food consumed during pregnancy, lactation, infancy and childhood must be appropriate to ensure improved nutritional status. Fish contains a significant quantity of micronutrients, essential fatty acids and protein, all of which make it a valuable food to improve diets among women and children. Fish consumption is especially important during the first 1000 days of a child's life, because the nutrients it provides promote optimal brain development.

This booklet serves as a guide for staff from government agencies and nongovernmental organizations to integrate fish-based recipes into nutrition programs that aim to improve dietary and child feeding practices in Malawi. The nutritional needs of pregnant and lactating women and their infants and young children were central to the development of this booklet, which focused on the role of small fish species in maternal and child nutrition. The recipes can be modified based on the seasonal availability of foods.

Mayera

Dr. Y. Ntupanyama

Secretary for Natural Resources and Climate Change

PREFACE

Despite the recognition of the importance of small fish species, small fish have not been used systematically in food and nutrition security interventions. Therefore, the impetus for this fish based recipe book was a realization that we had many fish based delicious recipes that had never been written. The consumption of fish is positively associated with increased growth and cognitive development especially during the first 1000 days and therefore with improvement in the overall health and nutritional status of women and children.

In this recipe book we have included recipes that involves the use of small fish species which are rich in minerals, vitamins, proteins and essential fatty acids. These nutrients are especially important for meeting nutrient needs of pregnant, lactating women and growing children and they are also beneficial to all household members. They are based on available local food materials and also preferences. The recipes were rated highly for their overall acceptability, appearance, odor, texture and taste in sensory evaluation with pregnant and lactating women, children under 2 years of age and men from rural areas.

This fish-based recipe book is a roadmap for anybody looking to learn the basics of cooking fish. We have ensured that the recipe book is not complicated and hence, it contains easy-to-follow recipe preparation tips.

Dr. F. Njaya | Director of Fisheries

ACKNOWLEDGEMENTS

The recipes in this booklet were developed and field tested in Chikwawa, Zomba, Dowa and Mzuzu Districts. However, the general guiding principles and recommendations for young child feeding are applicable in Malawi as a whole. The recipes can easily be adapted for use in different parts of Malawi so as to fit in with local food, eating patterns and the seasonal availability of different foods. The Department of Fisheries in Malawi would like to express gratitude to the people who contributed to preparing this booklet. The new fish recipes were developed by LUANAR. The already existing fish recipes in the districts, were modified and

tested by Principal Nutrition and HIV/AIDS Officers, Food and Nutrition Officers, District Nutritionist, District Fisheries Officers and Extension workers from Chitipa, Karonga, Rumphi, Nkhatabay, Likoma, Nkhotakota, Salima, Lilongwe, Phalombe, Zomba, Mangochi, Machinga, Nsanje, Chikwawa, Mulanje, Mwanza, Thyolo and Blantyre Districts. Financial support was provided by African Development Bank (AfDB) through Sustainable Fisheries, Aquaculture Development and Watershed Management (SFAD-WM) Project.

BACKGROUND

This booklet contains fish-based recipes. Each recipe includes small fish species, which are rich in minerals, vitamins, protein and essential fatty acids. These species are especially important for meeting the nutrient needs of pregnant, lactating women and children 6–23 months of age in the first 1000 days of life, which are the most critical. The recipes were developed to meet the specific nutritional needs of these target groups, but they are beneficial to all household members. They are based on local food availability, preferences and are relatively affordable for rural and urban consumers. The ingredients included can be grown or purchased in local markets. The recipes were rated highly for their overall acceptability, taste, smell, texture and appearance in

sensory evaluation with pregnant and lactating women, children under 2 years of age. Nutrient analyses were also carried out on the fish-based recipes and the results are included in this booklet. The Department of Fisheries led the development and testing of these recipes, together with several national and district stakeholders, including staff from the Ministry of Health; Ministry of Agriculture, Ministry of Local government, LUANAR and FAO. These recipes can be used throughout the country where fish is accessible to promote the consumption of fish-based foods during the first 1000 days of life and among all household members.

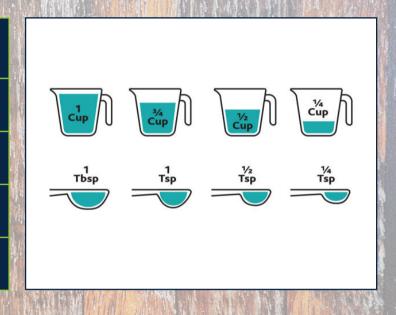
INTRODUCTION

The consumption of fish during the first 1000 days is positively associated with increased growth and cognitive development and therefore with improvement in the overall health and nutritional status of women and children. Lake Malawi for example, is home to 800 to 1000 fish species, making it the most fish species rich lake in the world. Small fish species hold potential to improve nutrition. When eaten whole, they are particularly rich in micronutrients such as calcium, vitamin A, iron and zinc, all of which play important roles in child development and growth. Dried small fish is accessible among households of low socioeconomic status in Malawi since it can be purchased at local markets in small quantities and at low costs. It can

also be transported and stored relatively easily. Among household members, dried Usipa, Kapenta and Utaka are often divided more evenly than larger fish or other animal source foods. Increasing access to small fish has the potential to improve the intake of essential nutrients among women and children (Longley et al. 2014). However, despite recognition of the importance of small fish species in Malawi, small fish have not been systematically used in food and nutrition security interventions in the country. This booklet can be used alongside other resources, for instance, The Malawi Recipe book to promote optimal dietary and feeding practices in the first 1000 days of life.

MEASUREMENTS

Volume	Liquid	Volume	Liquid
1 Cup	250ml	1 Tablespoon	15ml
½ Cup	125ml	1 Teaspoon	5ml
1/3 cup	85ml	½ Teaspoon	2.5ml
¹ /4 cup	65 ml	½ Teaspoon	1.2ml



PROCESSING FISH POWDER

Fish powder may be prepared in advance to reduce the cooking time and then stored for use when needed. If prepared in bulk and stored, the ingredients must be placed in clean and airtight containers and kept in dry places in the house to reduce spoilage and contamination from pests. Fish powder can be stored in a closed container in a cool dry place for up to a **month**.

Method

- i. Lightly roast dried fish for two to three minutes and dry in the sun.
- ii. Par-boiled fish such as *usipa* can just be further dried in the sun and pounded without roasting.
- iii. Pound or mill the fish into flour
- iv. Use the fish to enrich porridge made from the different types of flours.



Fish-Based Porridges

Porridge is a food commonly eaten as breakfast cereal dish made by boiling or heating, ground, crushed or chopped starchy plants and legumes (typically grain) in water or milk. Usually a thick porridge is made out of flour either from maize, soy beans, millet, sorghum or cassava. To enrich the porridge, sugar, oil, groundnuts, milk and vegetables can be added. For infants from 7 months old, porridge can be eaten more than 2 times in a day.





Sorghum and parboiled *Usipa*Porridge

Ingredients

- 2 Tablespoons of parboiled Usipa fish powder
- 1 1/4 cup whole maize meal
- 1 cup & 2 tablespoons of sorghum meal
- 1 tablespoon of groundnut flour
- 1/3 cup of sweet potato flour
- 1 tablespoon sugar to taste (optional)
- ½ Teaspoon of iodized salt
- 8 cups of water

Preparation

- In a bowl, mix the sorghum meal, pounded groundnut, sweet potato flour, dried fish powder and salt
- Mix 2 cups of water with the flour mix and make a smooth paste.
- Boil 6 cups of water in a pot.
- Add the flour paste to the boiling water and mix until smooth.
- Cook for 15 minutes and add sugar to taste.
- Serve warm.



2 Servings: 2/3 cup per serving (166 g)

Nutrition content per 100g of cooked dish

Energy (Kcal)	395.24	Fe (mg)	5.97	Na (mg)	13.51
Pro (g)	13.27	Ca (mg)	19.55	Ser (mcg)	0
Fat (g)	5.33	Mg (mg)	151.16	Vit A (mcg)	3.52
Carb (g)	76.58	Zn (mg)	1.49		
Fib (g)	5.85	Vit C (mg)	1.08		

ii

Millet and parboiled *Usipa* Porridge

Ingredients

- 6 tablespoons of parboiled *Usipa* fish powder
- 1 cup of roasted millet flour
- 4 tablespoons of roasted soya bean flour
- 1 tablespoon of pounded green vegetables
- 4 cups of water
- Sugar to taste (optional)
- Pinch of iodized salt

Preparation

- In a bowl, mix soy bean flour, dried Usipa Powder, ground millet and salt.
- Mix 1 cup of water with 1 cup of flour paste, make a smooth paste.
- Boil 3 cups of water in a pot.
- Add paste to the boiling water and mix until smooth.
- Cook for 20minutes.
- Add the pounded vegetables and simmer for 2 minutes.
- Add sugar to taste.
- Serve warm.



2 Servings: ½ cup per serving (125 g)

Energy (Kcal)	447.85	Fe (mg)	11.6	Na (mg)	4.9
Pro (g)	11.2	Ca (mg)	279.1	Ser (mcg)	3.1
Fat (g)	4.4	Mg (mg)	179.9	Vit A (mcg)	10.8
Carb (g)	41	Zn (mg)	1.2		
Fib (g)	9.4	Vit C (mg)	1.1		



Maize, Soy bean and parboiled *Usipa* Porridge

Ingredients

- 1/4 cup of parboiled *Usipa* fish powder
- 4 cups of whole maize flour
- 1 cup of Soy Bean Flour
- 8 cups of Water
- ½ teaspoon of iodized Salt
- Sugar to taste (Optional

Preparation

- Mix together maize flour and soy bean flour.
- Add a little cold water to the mixture to make a smooth paste.
- Boil water and add the flour paste.
- Add fish powder, cook on low heat until well cooked.
- Add iodized salt and sugar to taste.
- Serve warm.



6 Servings: 3/4 cup per serving (188 g)

Energy (I	(cal)	296.36	Fe (mg)	3.36	Na (mg)	14.28
Pr	o (g)	11.11	Ca (mg)	31.42	Ser (mcg)	0
Fa	t (g)	30.85	Mg (mg)	88.07	Vit A (mcg)	0.86
Car	b (g)	45.06	Zn (mg)	1.05		
Fi	b (g)	3.71	Vit C (mg)	0		

iv

Orange fleshed sweet potato and parboiled *Usipa* porridge

Ingredients

- 2 teaspoons of parboiled Usipa fish powder
- 2.5 cups of orange flesh sweet potatoes
- 1 cup of soy beans
- 3 cups of water
- 2 teaspoons of cooking oil
- ½ Teaspoon of iodized salt
- Sugar to taste (Optional)

Preparation

- Peel and boil sweet potatoes
- Mash the sweet potatoes, and add water to make a paste.
- Put the sweet potato paste on fire, add roasted soy bean flour, fish powder and more water.
- Cook on low heat until well cooked
- Add iodized salt and sugar to taste.
- Serve warm.



4 Servings: ½ cup per serving (125 g)

Energy (Kcal)	256.51	Fe (mg)	1.79	Na (mg)	11.53
Pro (g)	10.77	Ca (mg)	55.81	Ser (mcg)	0
Fat (g)	7.01	Mg (mg)	61.39	Vit A (mcg)	2.55
Carb (g)	30.27	Zn (mg)	0.4		
Fib (g)	3.67	Vit C (mg)	6.13		



Maize, parboiled *Usipa* and Vegetable Porridge

Ingredients

- 3 tablespoons parboiled Usipa fish powder
- 1 ½ cups of whole maize flour
- 1 teaspoon of pounded vegetables
- 5 Cups of water
- 1 tablespoon of sugar(Optional)
- ½ teaspoon of lodised salt

Preparation

- Mix maize flour and Usipa powder with cold water in a pot.
- Put the pot on fire and continue stirring until the mixture starts boiling.
- Allow the porridge to boil on low heat for 10-15 minutes.
- Add pounded vegetables, iodized salt and sugar to taste.
- Allow to cook for two to three minutes.
- Serve warm.



1 Serving: 1 cup per serving (250 g)

		_					_
	Energy (Kcal)	260.28	Fe (mg)	9.6	Na (mg)	297.6	
Service Feb	Pro (g)	9.93	Ca (mg)	28.27	Ser (mcg)	0.1	100
	Fat (g)	4.67	Mg (mg)	112.05	Vit A (mcg)	16.85	TAXABLE OF
	Carb (g)	61	Zn (mg)	1.98			A PARTIE
	Fib (g)	4.52	Vit C (mg)	0.38			

vi

Cassava, soy bean and parboiled *Usipa* fish porridge

Ingredients

- ½ cup of parboiled Usipa fish powder
- 2 cups of cassava flour
- ½ cup of roasted soy bean flour
- 2 level teaspoons of pounded leafy vegetables
- 4 cups of water
- ½ teaspoon of iodized salt
- 2 tablespoons of sugar (optional)

Preparation

- Put 4 cups water and the fish flour into the pot and bring them to boil.
- Cook the mixture for 5-10 minutes.
- Add a teaspoon of pounded vegetables and a tablespoon of cooking oil and cook for 2 minutes.
- Let the mixture cool after which cassava flour and roasted soy flour should be added while continuously stirring to avoid lumps and let it simmer for 2 minutes.
- Add iodized salt and sugar (optional) to taste.



4 servings: 2/3 cup per serving (167 g)

THE RESIDENCE AND THE PERSON NAMED IN STREET			在 100 000 000 000	PMA 4	
Energy (Kcal)	139.84	Fe (mg)	3.53	Na (mg)	39.80
Pro (g)	11.0	Ca (mg)	113.42	Ser (mcg)	0.07
Fat (g)	4.67	Mg (mg)	99.6	Vit A (mcg)	5.0
Carb (g)	50.04	Zn (mg)	0.55		
Fib (g)	3.21	Vit C (mg)	2.09		

2

Fish Based Snacks and Relish

By the age of 12 months, children can eat suitable family meals and snacks. Therefore, the child can be fed three family meals everyday (breakfast, lunch and supper), one to two snacks between the meals, and breastmilk as demanded. Good snacks for young children should include foods that will encourage chewing to strengthen their teeth and jaws. Adequate nutrition before, during pregnancy and throughout the lactation period is critical for proper growth and development of the child. Pregnant women should eat two extra meals or snacks in between main meals each day for additional energy and nutrients for themselves and their growing baby. Lactating women should eat one extra meal each day for additional energy and nutrients for themselves and their growing baby. These fish based snacks and relish can be consumed as extra food for the whole family.



i

Dry Kampango Balls

Ingredients

- 4 cups of dried Kampango
- 2 medium Onions, chopped
- 4 cups mashed Irish potato
- 1 egg, beaten
- 1 tablespoon wheat flour
- 1 tablespoon Curry powder, optional
- Oil for deep frying
- ½ teaspoon of iodized Salt
- 1 teaspoon of black pepper

Preparation

- Cook the fish with half onions, the tomatoes if used, seasoning and a very little water till it flakes.
- Mix the mashed potato with the egg, wheat flour, curry powder if used
- Add the flaked fish and a little fish stock if needed to make a firm but not very dry mixture.
- Roll the mixture into small balls and fry in hot oil.
- Serve them with green vegetables or as a snack.



24 Servings: ¼ per serving (75 g); serve as a snack

Energy (Kcal)	185.34	Fe (mg)	2.69	Na (mg)	12.41
Pro (g)	39.59	Ca (mg)	522.28	Ser (mcg)	0.58
Fat (g)	14.46	Mg (mg)	126.79	Vit A (mcg)	3.08
Carb (g)	9.25	Zn (mg)	0.75		- 50
Fib (q)	1.28	Vit C (mg)	1.51		

ii

Fresh Usipa Fish Sausage

Ingredients

- 13 cups of fresh Usipa
- 5 ½ cup of TSP soya
- 2 tablespoon of Binder
- 4 tablespoon of Chakalaka
- 3 tablespoon of BBQ
- 1 tablespoon of Cayenne pepper
- 1 ½ tsp of Black pepper
- 3 teaspoon of White paper
- 2 tablespoon of Garlic powder
- 1 ½ teaspoon of Vinegar
- Vinegar 43 g

Preparation

- Clean the fish
- Make a slit along the belly from the fish's rectum up to where the head begins.
- Remove all the innards and discard.

- Rinse the fish in cold water, and place on cutting board.
- Pound the fish.
- Repeat on the other side as well.
- Assemble the meat mincer and grind the fish meat using the mincer.
- Grind TSP Soya with blender and soak in boiled water for 4 minutes.
- Add fish mince, TSP soya, all spices, binder, vinegar, vegetable oil and mix well.
- Wash casings with clean water.
- Stuff the semi-solid fish paste (sausage paste) into casings.
- Brown them in a hot frying pan with small amount of oil.
- Serve them with green vegetables or as a snack



18 Servings: ½ cup per serving (125 g)

THE REAL PROPERTY.	Energy (Kcal)	344.8	Fe (mg)	6.12	Na (mg)	68.27
	Pro (g)	42.34	Ca (mg)	239.7	Ser (mcg)	0.58
	Fat (g)	12.65	Mg (mg)	175.51	Vit A (mcg)	35.78
	Carb (g)	18.76	Zn (mg)	1.7		
THE REAL PROPERTY.	Fib (g)	8.5	Vit C (mg)	1.17		



Fresh *Usipa* Fish Balls

Ingredients

- 13 cups of fresh Usipa
- 5 ½ cup of TSP soya
- 2 tablespoon of Binder
- 4 tablespoon of Chakalaka
- 3 tablespoon of BBQ
- 1 tablespoon of Cayenne pepper
- 1 ½ tsp of Black pepper
- 3 teaspoon of White paper
- 2 tablespoon of Garlic powder
- 1 ½ teaspoon of Vinegar

Preparation

- = Clean the fish
- Make a slit along the belly from the fish's rectum up to where the head begins.
- Remove all the innards and discard.

- Rinse the fish in cold water, and place on cutting board.
- = Pound the fish.
- Repeat on the other side as well.
- Assemble the meat mincer and grind the fish meat using the mincer.
- Grind TSP Soya with blender and soak in boiled water for 4 minutes.
- Add fish mince, TSP soya, all spices, binder, vinegar, vegetable oil and mix well.
- Mold the mixture into balls.
- Brown them in a hot frying pan with small amount of oil.
- Serve them with green vegetables or as a snack.



18 Servings: ½ cup per serving (125 g)

THE PERSON NAMED IN	Energy (Kcal)	344.8	Fe (mg)	6.12	Na (mg)	68.27
	Pro (g)	42.34	Ca (mg)	239.7	Ser (mcg)	0.58
	Fat (g)	12.65	Mg (mg)	175.51	Vit A (mcg)	35.78
	Carb (g)	18.76	Zn (mg)	1.7		60
	Fib (a)	0 E	Vit C (mg)	1 17		

iv

Parboiled Usipa fish Biscuit

Ingredients

- ¼ cup + 1 tablespoon of parboiled *Usipa* fish powder
- 1 cup + 5 tablespoon of All-purpose wheat flour
- 1/4 cup of White sugar
- 2 tsp Vanilla extract
- ½ cup + ½ tablespoon of Butter

Preparation

- Pre-heat the oven at 150 degrees C
- Cream butter with sugar until light and fluffy
- Mix in vanilla and flour until the dough is formed.
- Roll out about 5mm and cut into sizable biscuit shapes.
- Bake for 20-25 minutes until a brown colour is achieved.



27 Servings: 1 Tbsp per serving (15 g); serve as a snack

Energy (Kcal)	506.37	Fe (mg)	2.11	Na (mg)	21.19
Pro (g)	11.33	Ca (mg)	112.77	Ser (mcg)	0
Fat (g)	40.29	Mg (mg)	49.03	Vit A (mcg)	1540.1
Carb (g)	44.14	Zn (mg)	0.17		
Fib (g)	0	Vit C (mg)	0	美國	

V

Kanyenya Wa *Utaka*

Ingredients

- 5 medium sized fish
- 1 cup of Cooking oil
- 1 teaspoon of Salt
- 1 large medium Onion
- 1 cup + ³/₄ cups of Wheat Flour
- 2 tablespoons Food Color
- 3/4 cups of Water

Preparation

- Pick clean fish.
- = Cut the fish in half.
- Clean the fish in warm water to remove dirt.
- Chop the onion.
- Mix flour, food colour, chopped onion and salt
- Pour water into the wheat flour while stirring slowly until it turns into a paste.
- Dip the fish in the paste.
- Pour oil in a pan and wait till hot.
- Fry your fish until golden brown.
- Remove the fish and put in a clean plate
- Serve them with green vegetables or as a snack.

28 Servings: ¼ cup per



serving (63 g); serve as a snack

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	Energy (Kcal)	430.29	Fe (mg)	3.53	Na (mg)	5.9	
	Pro (g)	11.42	Ca (mg)	375.66	Ser (mcg)	0.18	
	Fat (g)	16.01	Mg (mg)	95.14	Vit A (mcg)	3.35	
	Carb (g)	7.41	Zn (mg)	0.2			
Total Control	Fib (g)	0.16	Vit C (mg)	0.5	4.69		

vi

Parboiled *Usipa* and Eggplants

Ingredients

- 2 ¹/₄ cups parboiled Usipa fish
- 1 medium egg plant
- 3 medium tomatoes
- 2 medium onions
- 2 tablespoon of cooking oil
- 2 cups of water
- ½ teaspoons of iodized salt

Preparation

- Wash small fish in hot water
- Wash egg plants and slice into pieces
- Wash and cut tomatoes and onion
- Place the fish, egg plants, tomato and onions in alternate layer beginning with the fish.
- Add cooking oil
- Add water
- Add iodized salt to taste
- Cook until done.
- Serve with Nsima or rice as relish



8 Servings: ½ cup per serving (125 g)

Energy (Kcal)	106	Fe (mg)	1.9	Na (mg)	50.1
Pro (g)	12.8	Ca (mg)	409.4	Ser (mcg)	0.6
Fat (g)	3.4	Mg (mg)	36.8	Vit A (mcg)	14.6
Carb (g)	5.9	Zn (mg)	6.7		
Fib (g)	0.4	Vit C (mg)	1.9		



Orange fleshed Sweet Potatoes & Parboiled *Usipa* fish Scones

Ingredients

- 1 tablespoon parboiled Usipa fish powder
- 1 cup of mashed orange fleshed sweet potatoes
- 3 ½ cups of wheat flour
- 3 ½ cups of soya bean flour
- 4 ½ tablespoons of whole egg
- 1 1/4 cups of milk
- 5 tablespoons of cooking oil
- 2 Teaspoons of baking powder

Preparation

- Sift wheat flour and add salt, baking powder, fish and soya flour.
- Stir together mashed sweet potato, oil, milk, egg and sugar in a
- medium bowl.
- Knead the dough very lightly and make scones of desirable sizes.
- Bake for 12-15 minutes until well risen and golden.
- Serve as a snack.



21 Servings: ¼ cup per serving (75 g); serve as a snack

			And the second second			aii
Energy (Kcal)	461.32	Fe (mg)	2.78	Na (mg)	290.03	STATE OF
Pro (g)	10.93	Ca (mg)	107.95	Ser (mcg)	0	THE REAL PROPERTY.
Fat (g)	9.27	Mg (mg)	38.68	Vit A (mcg)	28.34	THE PERSON
Carb (g)	34.15	Zn (mg)	0.4			
Fib (g)	1.02	Vit C (mg)	1.36			

viii

Orange fleshed Sweet Potato & Parboiled *Usipa* Fish Doughnuts

Ingredients

- 4 tablespoon of parboiled *Usipa* fish powder
- 1 cup of mashed orange fleshed sweet potatoes
- 2 cups of roasted soy bean flour
- 2 cups of wheat flour
- 1 Egg
- 1 cup of milk
- 2 teaspoons of baking powder
- · cooking oil
- ½ teaspoon of iodized salt

Preparation

- Use 1 part OFSP puree to 2 parts wheat flour.
- Combine all ingredients, mix until smooth.
- Roll out the dough and cut out the doughnuts.
- Heat oil in a heavy pot.
- Drop the doughnuts into hot oil, and fry until golden brown.
- Serve as a snack.



56 servings: 2 Tbsp per serving (30 g); serve as a snack

Energy (Kcal)	497.52	Fe (mg)	2.1	Na (mg)	143.5
Pro (g)	12.2	Ca (mg)	88.9	Ser (mcg)	0
Fat (g)	38.7	Mg (mg)	41.1	Vit A (mcg)	25.3
Carb (g)	32.6	Zn (mg)	0.4	Water	29.4
Fib (g)	1.2	Vit C (mg)	1.2		

ix

Fish Chutney

Ingredients

- 10 tablespoons of parboiled *Usipa* fish powder
- 4 tablespoons of pounded raw groundnuts
- ½ medium size finely chopped onion
- 1 teaspoon of chili powder
- 1 teaspoon of salt
- 6 teaspoons of vegetable oil

Preparation

- Wash the dried small fish.
- Remove the fish from the water, roast for 30 minutes over low heat and then coarsely pound.
- In a pan, heat oil then add coarsely pounded fish and fry over medium heat for 15 minutes.
- Add onions and continue frying for another 10 minutes.
- Add pounded groundnuts and cook for 15 minutes or until mixture stops sticking.
- Add salt and chili powder and then fry for 5 minutes.
- Remove from heat and leave to cool.
- Store in an airtight container.
- Serve as a condiment on scones or bread.



7 Servings: 2 Tbsp per serving (30 g)

Energy (Kcal)	357.48	Fe (mg)	5.88	Na (mg)	11.56
Pro (g)	14.58	Ca (mg)	374.01	Ser (mcg)	1.34
Fat (g)	29.21	Mg (mg)	215.98	Vit A (mcg)	0
Carb (g)	6.75	Zn (mg)	1.91		4.0
Fib (g)	1.66	Vit C (mg)	2.99		

Fish Powder Spice

Ingredients

- 2 tablespoons of roasted parboiled *Usipa* fish powder
- 1 teaspoon salt
- 1 teaspoon of turmeric powder
- ½ t3easpoon of chili powder

Preparation

- In a small bowl, thoroughly mix the dried fish powder, salt, turmeric powder, and Chili powder.
- This can be added on fried fresh fish, fish balls and sausages.

Energy (Kcal)	161.87	Fe (mg)	5.91	Na (mg)	52.05
Pro (g)	18.2	Ca (mg)	332.16	Ser (mcg)	0
Fat (g)	6.63	Mg (mg)	163.7	Vit A (mcg)	0
Carb (g)	7.21	Zn (mg)	1.04		
Fib (g)	1.41	Vit C (mg)	4.01		





