MICROBIOLOGICAL AND PHYSICO-CHEMICAL CHARACTERISTICS OF RODRIGUAN CHINESE SAUSAGES



La gualité pour le développement

en Océan Indien

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INTRODUCTION

Pork Production Sector in Rodrigues

One of the main livestock species farmed on the island (Pop. Size 7500)



An important component of the livestock sector

- Small scale production units scattered over the island (2400 breeders)
- Export to Mauritius (~ 1500 pigs)
- Pork is the most consumed meat (2000 pigs slaughtered yearly





Pork processed products(20% of slaughtered pigs)

YPES OF PROCESSED PORK PRODUCTS 100 66.6 56.1 40.4 21.1 12.3 10.5 5.3 5.3 Salted meat sales Black blood sausabes Chinese sausabes cured ham Witoul nam nam sales



Sausage Characteristics

Heterogeneity in products

- Degree of Mincing
- Diameter, Length & Weight
- Colour
- Amount of raw materials

LACK OF INFORMATION MICROBIOLOGICAL & PHYSICO-CHEMICAL CHARACTERISTICS



BETTER DESCRIPTION AND CHARACTERISATION

Objectives and Samples Analysis

Objectives To determine the microbiological and physicochemical characteristics of the Rodriguan chinese sausages

Aim**s**

- Production of standard products
 - Improved safety, quality and shelf life
- Meet the consumer exigencies
- Consolidate and expand actual markets

Physico-chemical Analysis

- □ pH & Titratable Acidity (TA)
- Water activity, a_w
- □ Total Viable Counts (TVC)
- Total Coliform
- Salmonella
- □ Staphylococcus,
- □ Lactic acid bacteria (LAB)
- Colour, CIE (L*, a* and b*)
- Moisture, Fat and Protein Content
- Mass Loss

Sampling Frame



Physicochemical characteristics of the sausages

Parameter		95% Confidence Interval		
pH		(4.60, 4.82)		
Titratable Acidity (% lactic acid)		(1.33, 1.56)		
Water Activity (a_w)			(0.866, 0.891)	
Moisture (g/100g)			(53.82, 57.44)	
Protein (%)	Typical of dry -cul	red	(31.0-36.0)	
Fat (%)	Termented product		(33.3-44.8)	
Colour Parameter				
Lightness (L*)		(36.90,44.73)		
Redness (a*)		(12.42,15.05)		
Yellowness (b*)			(7.37,8.91)	

Microbiological Characteristics of Rodriguan Chinese sausages

Microbial flora		Count (log CFU/g) 95% Confidence Interval	
Lactic acid bacteria			(7.08, 7.50)
Total Viable Count	Variable microbiological quality		(7.80,8.11)
Total Coliform			(2.87, 3.31)
Staphylococcus spp		Only detected in some batches (~ 3)	
E.coli		Not detected	
Salmonella (in 25g)		Not detected	

Concluding Remarks

CONCLUSIONS

- Satisfies the criteria of dry-cured raw meat products
- A relatively safe and stable product
- However, variations in physicochemical and microbial characteristics.
 - Indication of contamination of raw materials and microbial growth during processing

FUTURE WORK

- Such variations is an obstacle to the definition of the product identity/brand for marketing
 - Need to improve the microbiological quality and safety of the sausage
 - Process Steps of Manufacture

THANK YOU FOR YOUR KIND ATTENTION

