

Optimizing Formulation and Fermentation Time of Thai Fermented Pork Sausage (Sai Krok Prew) Using Starter Cultures

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ABSTRACT

Ingredients (0.7-2.5% sugar and 1.5-3% salt), raw materials (35-65% minced pork, 15-35% minced pork lard and 20-40% sticky rice) and starter cultures (Lactobacillus plantarum, Pediococcus cerevisiae and Micrococcus varians at 4-8 Log cfu/g of each bacteria) in Sai Krok Prew formulation were optimized. Fermentation time (24, 36 and 48 hr) was also investigated. Sausage qualities were determined by measuring pH, total acidity as lactic acid, color Lab, shear force and sensory evaluation. The suitable formulation was the addition of 1.6% sugar, 2.07% salt, 6 Log cfu/g for each bacteria and using minced pork, minced pork lard and sticky rice at ratio of 46.84:23.60:29.56. The optimum fermentation time was 24 hr.

Key words : Fermented sausages, Starter cultures, Product development

INTRODUCTION

Sai Krok Prew or Sai Kork E Sarn, a kind of Thai fermented sausage, is made from pork, pork lard, cooked rice and seasoning, stuffed into pork casing or other edible casings and then fermented until becoming sour, and cooked before eating (Thai Industrial Standards Institute, 1994). Starter cultures have been used in the sausage production to reduce fermentation time, ensure low residual nitrate and nitrite contents in the end product and standardize the organoleptic characteristics (Hugas and Monfort, 1997). Lactic acid bacteria as well as *Micrococcaceae* strains, important microorganisms used as starter cultures in meat fermentation, improve safety and stability of the product, extending the shelf life and provides diversity resulting in new sensory properties as well as health benefits by probiotic characteristic (Lücke, 2000).