## พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสีเขียวนี้เพียงแผ่นเดียว

# # C627236 KEY WORD: : MAJOR FOOD TECHNOLOGY

: RICE WINE/GLUTINOUS RICE

WARARAT CHOTIWANAPORN: PRODUCTION OF BLACK GLUTINOUS RICE WINE USING

PURE CULTURE FERMENTATION THESIS ADVISOR

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That fermented rice wine has been done for a long time and always has the problem about its quality and spoilage due to the activity of unnecessary microbes in Look-Pang. Therefore, the isolation of active pure culture of mold and yeast from Look-Pang would solve this problem. This research is aimed at isolate the mold and yeast from Look-Pang produced and sold throughout Thailand and using them to produce rice wine from black glutinous rice. The study found 87 Rhizopus sp. -alike- isolates and 107 Saccharomyces sp. -alike- isolates. Among the mold isolated, LM18 from Song District, Phrae Province was found to be the most efficient as it could hydrolysed starch in rice and gave total soluble solid up to 25.10°Brix, total acidity 0.53% and reducing sugar 19.16%. The product at this step has a fermented rice flavor. LM18 was classified as Rhizopus sp. Among the yeasts isolated LY17 which was classified as Saccharomyces sp. has the highest ability to ferment 10°Brix in the presence of 15% ethanol.

Comparing the fermentation of black glutinous rice wine using pure cultures LM18 and LY17 with Song District's Look-Pang which is the source of both LM18 and LY17. The result showed that black glutinous rice wine fermented from pure culture had 16.90% alcohol, 7.10°Brix total soluble solid, pH 3.79 and 0.58% total acidity. Black glutinous rice wine fermented from Look-Pang had 12.75% alcohol which was lower amount than fermented from pure culture which has total soluble solid 10.10°Brix, pH 3.55 and 0.92% total acidity. The sensory evaluation of products in color, odor, flavor and overall acceptability was not significantly different (P>0.05). This will be the guideline to produce the rice wine by using pure cultures for the industrial level. The product had high level alcohol and the odor and flavor was not different from the product fermented by Look-Pang which the consumers accustom to.

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สาขาวิชา เทค์ในโลยีทางอาหาร	ลายมือชื่ออาจารย์ที่ปรึกษา 🎎
ปีการศึกษา 2539	ลายมือชื่ออาจารย์ที่ปรึกษาร่วม