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MAYUREE SOMWATH : CHANGES IN IODINE CONTENT IN FERMENTED FISH (PLA-RA) MADE WITH IODATED SALT (FIS), AND SENSORY ACCEPTABILITY OF VARIOUS FERMENTED FISH PRODUCTS. THESIS ADVISOR : SAKORN DHANAMITTA M.D., D.Sc, PONGTORN SUNGPUAG D. Sc, ANADI NITITHAMYONG Ph.D., SANGSOM SINAWAT M.D., 150 p ISBN 974-661-474-6

Four kinds of iodated salt, two from marine salt and two from rock salt, with different iodine content (two were lower than 50 ppm, the others were higher than 50 ppm) were used for preparing fermented fish for 6 months by using the traditional recipes from Ubol Rajathani, Rachaburi, and Tak province. The proportions of iodated salt: fish used from Ubol Rajathani, Rachaburi, and Tak province were 500g/ 1kg, 250g/ 1kg and 200g/ 1kg, respectively. The results of this study showed that the iodine content in brine and flesh at the first day of fermentation until 6 months of storage were significantly different ($P < 0.05$). Iodine content in brine slowly decreased after the first day of fermentation until 6 months of storage, and was significantly different ($P < 0.05$) among four kinds of fermented fish (pla-ra) made with each type of salt. Iodine content in flesh rapidly increased after the first day of fermentation until 6 months of storage, and was significantly different ($P < 0.05$) among four kinds of fermented fish made with each type of salt. However, the iodine content in uncooked (in brine and in flesh) fermented fish made with iodated salt (FIS) remained high enough to meet for human requirement according to RDA for iodine when eaten in the normal serving size of 10g. At three and six months, FIS used to prepare for common dishes in each province. The losses of iodine occurred after cooking procedures. The average iodine lost after grilling and frying were 5-7% and 20-22%, respectively, while the average iodine loss of 30% was recorded after boiling. Since, the iodine content in cooked common dishes made from FIS may or may not be enough for human requirement according to RDA. In this study, some cooked common dishes made from FIS, the iodine content exceeded RDA. Iodine content in finished common dishes depended on iodine content of iodated salt, proportions of iodated salt and fish used and amount of FIS used for cooking. The amount of FIS used at 6 months is usually less than of 3 months because the dishes becomes more concentrated and salty. Sensory acceptability tests for all dishes made with FIS were conducted by using 30 panelists in each province. The sensory evaluation results of FIS common dishes at 3 and 6 months showed that the overall acceptability scores of FIS common dishes showed no significant difference ($P > 0.5$) and the scores for general appearance, color and texture were similar and ranged between "like moderately" to "like very much".