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WASAN PIYASATIDTHAM : ALUMINIUM LEACHING FROM ALUMINIUM UTENSILS INTO FOODS COOKED AT DIFFERENT CONDITIONS. THESIS ADVISORS : KOMOL SIVABORVORN, Dr. P.H. (Environmental Health Science), PISIT VATANA-SOMBOON, M.Sc. (Environmental Health) , NIPAPUN KUNGSKULNITI, Dr. P.H. (Environmental Health), 74 p. ISBN 974-662-549-7

The purpose of this study was to identify factors affecting the amount of aluminium leaching from aluminium cooking untensils into foods being cooked. Various foods were cooked under the following conditions : sour soup at pHs of 3.0 and 4.0; clear soup with salinities of 4.0 and 8.0 parts per thousand; fish was fried for 4.0 and 6.0 minutes; and swamp cabbage (chinese) was stir-fried at temperatures of 200°C and 300°C. Stainless-steel cooking utensils were used as control units. All the cooked foods were analyzed for aluminium by atomic absorption spectrophotometer.

The results showed that the levels of pH of foods and cooking temperatures affected the amount of the aluminium leaching from the aluminium cooking untensils into foods; that is, alumnium contents increased at lower pH values or higher temperatures. In contrast, levels of salinity of foods and cooking time did not affect the aluminium contents leaching from the aluminium cooking utensils into foods. There was no difference in the amount of aluminium leaching out when the foods were cooked at different salinities or cooking times.