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M.Sc.(ENVIRONMENTAL SANITATION)

KEY WORD : CONTAMINATION OF ALUMINIUM / ALUMINIUM FOIL / OVEN

SUCHADA BOONYANAN : CONTAMINATION OF ALUMINIUM IN BAKING ALUMINIUM FOIL WRAPPED MEAT. THESIS ADVISOR: SHALASAI HUANGPRASERT, B.Sc.(Sanitation), M.P.H., PAKORN SUMATHANURUKAKUL, B.Sc.(Biology), M.Sc.(Parasitology), DAP&E, PATTANA MULPHRUK, B.Sc.(Sanitation), M.Eng(Sanitation). 96 p. ISBN 974 - 661 - 054 - 6

The purpose of this study is to find out the amount of aluminium released from aluminium foil wrapped meat into baked meat of fish, chicken and beef after different baking times and temperatures. The study design established experimental baking times at 20, 30 and 40 minutes and baking temperatures at 200 °C, 225 °C, 250 °C and 275 °C . The experimental results obtained from Atomic Absorption Spectrophotometry with 3 replicates were analyzed statistically by factorial ANOVA and Multiple regression and compared with data from control replicates as well.

The results show that aluminium release increased with an increase in baking time or baking temperature. A statistical analysis show that the baking time and the baking temperature had significant effect (P-value < 0.05), while the kind of meat had no significant effect (P-value > 0.05).