

Thesis Title A Study of the Application of *E.coli* samples of cooked foods were also
Examination in Food by MUG
Name Apagorn Reangrunroj
Degree Master of Science (Public Health)
Major in Environmental Health

Thesis Supervisory Committee

Komol Sivaborvorn, Dr.P.H.

Udom Kompayak, M.P.H.

Suthi Athipanyakom, M.S.

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ABSTRACT

The determination of *E.coli* in food was conducted by using 4-methylumbelliferyl- β -D-glucuronide (MUG) reacts with β -glucuronidase (GUD) enzyme which is specific in *E.coli*. The experiment was done with *E.coli* pure culture at room temperature comparing with 35° c and was controlled by standard MPN method. The result showed that there was no significantly different (P-value = 0.10) in incubation time at room temperature and 35° c. The correlation between incubation time of MUG method and standard MPN method by using Spearman Ranks Correlation Coefficient was (R) = -0.9606. It was also found that the Sensitivity, Specificity and Efficiency of the test was 100% in every value.

E.coli in 50 samples of cooked foods were also determined by MUG method at room temperature with standard MPN coliform controlling. The result showed that correlation between incubation time of cooked food in MUG and MPN standard was rather high, $R = -0.8558$ (95% confidence) But the Sensitivity, Specificity and Efficiency of the test were 100%, 81.25% and 94% respectively. When compare the result of pure culture and cooked food in MUG method, it was found that the cooked food was lower, it is because the interference of the ingredients in cooked food.