

PHAHOL SAKKATAT : A COMPARISON ON EFFICIENCY OF METHODS FOR TESTING  
THE DIFFERENCE BETWEEN MEANS IN ANALYSIS OF VARIANCE : THESIS ADVISOR  
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The purpose of this study is to compare the efficiency of the methods for testing the difference among treatment means in analysis of variance, namely, Unrestricted LSD (U-LSD), Bonferroni (Dunn) T-test (Bon), and Murphys Gap LSD, under the normal distribution of population. The mean and variance of the normal distribution were zero and one, respectively. The Monte Carlo Simulation Technique was used by simulate the treatment from a computer program 1,000 rounds for each case to calculate type I error and power of the test. The number of the treatment was 2 to 10 for both completely randomized design and randomized complete block design. The completely randomized design was used with 5, 10, 15 and 20 in the number of replication and the completely randomized block design was used with 5, 7 and 10 in number of block.

The result shows that the Murphys Gap LSD was suitable for the completely randomized design when the number of the treatment was 2 to 5, and it was suitable for the completely randomized block design when the number of the treatment was 2 to 8. On the other hand, the Unrestricted LSD was suitable for the completely randomized design when the number of the treatment was 6 to 10, but when the randomized complete block design was used, and the number of the treatment was 9 to 10, there was not any appropriate method for testing.