Interdisciplinary Mathematical Statistical Techniques (Shanghai 2007), May 20–23, 2007, University of Science and Technology of China, Hefei, Anhui, P.R.China

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ROBUSTNESS AND POWER OF FEW TESTS FOR TESTING MAIN EFFECTS IN A THREE-WAY FACTORIAL EXPERIMENT

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For the three-way factorial experiment when interaction effects are not present,we compare three test statistics namely F, rank transform statistic and normal score statistics in terms of power.The simulation results show that normal score statistic is powerful than the other two for testing main effects in case of normal and uniform distribution whereas rank transform test shows more power in case of double exponential and logistic distribution.

Key words: Three-way layout; Robustness; Power, Rank Score

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