

# Bayesian Multiple Comparison of Normal Populations based on Bayes Factor

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## Abstract

In this paper, we develop the Bayesian multiple comparison procedure for the normal model. The procedure which we suggest is based on the fractional Bayes factor of O'Hagan (1995). We apply our procedure to normal populations, when noninformative prior is assumed to the model parameters.

We derive explicit form of Bayes Factors when the number of populations is greater than 3. A famous data is analyzed by the proposed procedure. For this example, the suggested method is straightforward for specifying distributionally and to implement computationally, with output readily adapted for required comparison.

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