

**Title:** Exact likelihood inference for two exponential populations under joint Type-II hybrid censoring scheme

**Authors:** A.R. Shafay

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### **Abstract**

When Type-II hybrid censoring is used on two samples in a combined manner, the exact inference for two exponential populations is developed in this paper. The two unknown exponential mean parameters' conditional maximum likelihood and Bayesian estimators are determined. The maximum likelihood estimators' conditional moment generating functions and conditional exact distributions are then calculated. For the unknown parameters, the exact, approximate, and Bayes credible confidence intervals are also constructed. In addition, a Monte Carlo simulation study is carried out to evaluate the performance of the two estimation methods and also the three confidence intervals. Finally, using a real data set, some numerical results are presented.