


## Original Paper

# Proposed the ANOVA Method for Analysis of Proficiency Test Result

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## Abstract

Analysis of variance “ANOVA”, as a trustful statistical method most commonly applied to the results of the experiment to determine the percent contribution of each factor, is used in this paper in comparison with Z-score statistical method. Z-score, Zeta score, and En number are the most credible statistical methods used in proficiency testing evaluation. In this paper four different PT examples were demonstrated, both ANOVA as well as Z-score were used for the analysis of the testing. The first example showed a consistency of the results between both of them, however in the other three examples dissimilarity happened between the two results. While Z-score gave the participant laboratory a satisfactory result, ANOVA gave the same laboratory unsatisfactory result. Final results showed the advantage and reliability of ANOVA analysis over Z-score analysis.

## Keywords

Proficiency test; ANOVA; Z-score