

# How to Evaluate and Monitor Quality on an Ordinal Scale Basis?

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A new approach for dealing with ordinal quality variables, free of any latent numerical scale assumptions is proposed. In this method the quality of a given sample is characterized by its relative position on the constructed quality ladder. The authors propose a new mechanism for constructing such a quality ladder for a ternary quality data. The underlying logic, advantage and applications of the proposed method are discussed and demonstrated using software developed by the authors. Next, the authors consider statistical quality control by means of sample data received on a ternary ordinal scale. The emphasis is on working with large samples, which enable the statistical analysis, estimation and control by use of approximate analytical expressions of quality level and dispersion to be considerably simplified. Two complementary studies demonstrate the usage of the proposed approach.