

The role of uncertainty of measurement in conformance testing

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- Introduction
- Tolerance limits and intervals
- Acceptance limits
- Knowledge of the measurand
- Probability of conformance
- Consumer / producer risks
- Summary



The role of uncertainty of measurement in conformance testing

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– Risk

The role of uncertainty of measurement in conformance testing

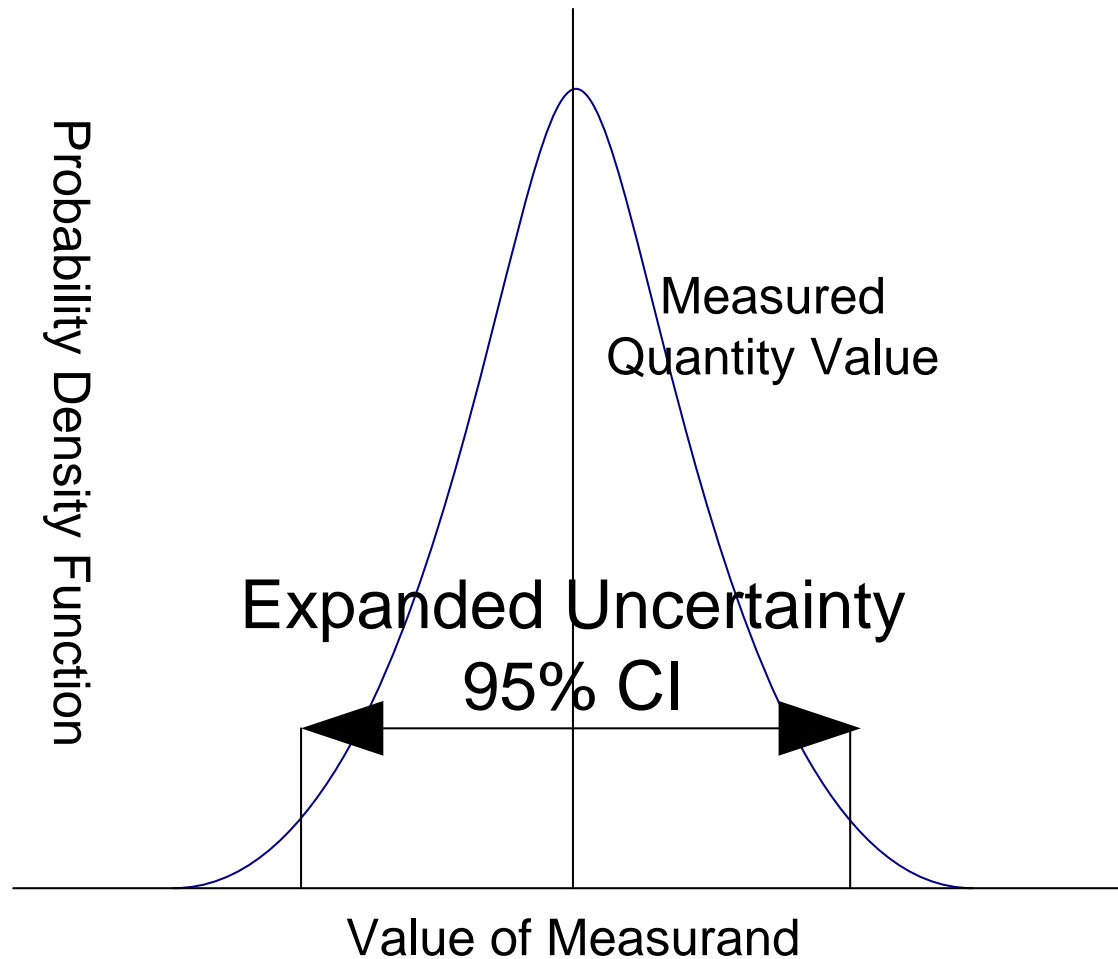
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- Intervals and Limits



- Probability & UoM

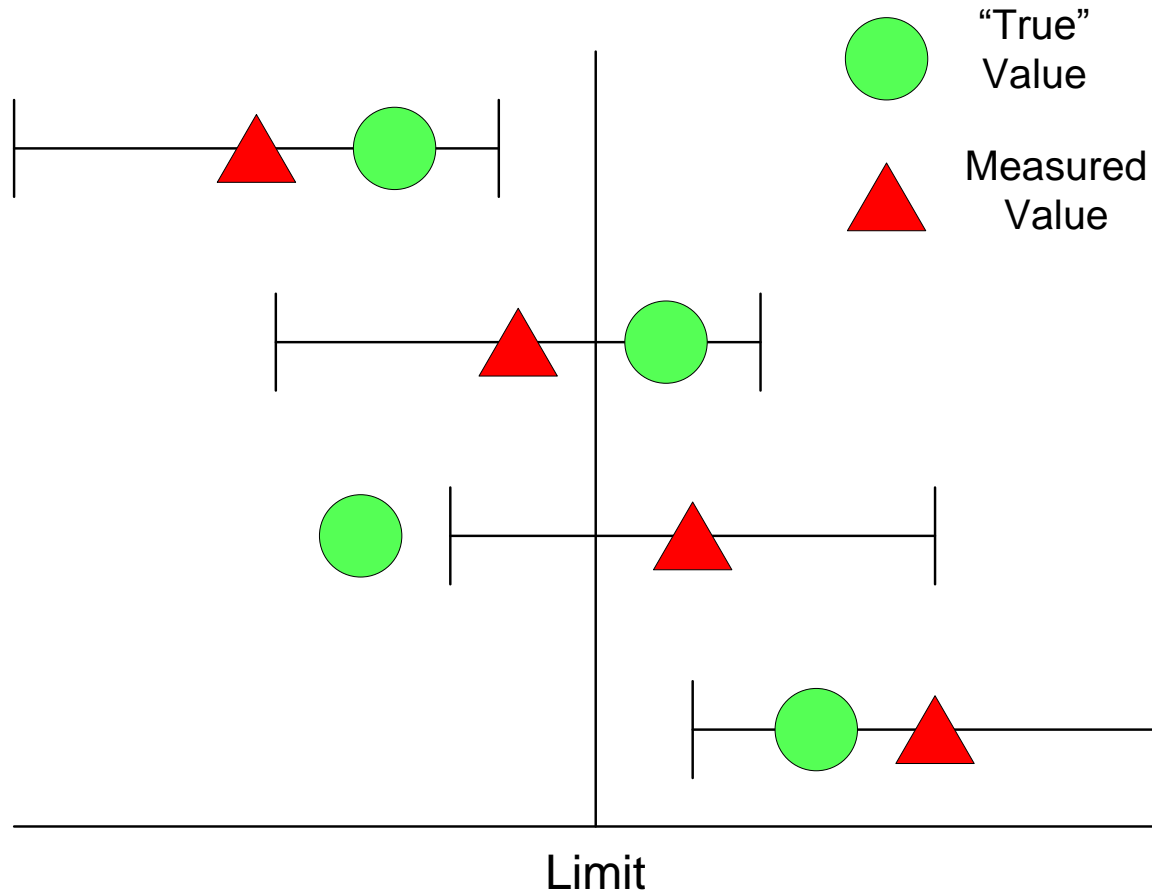


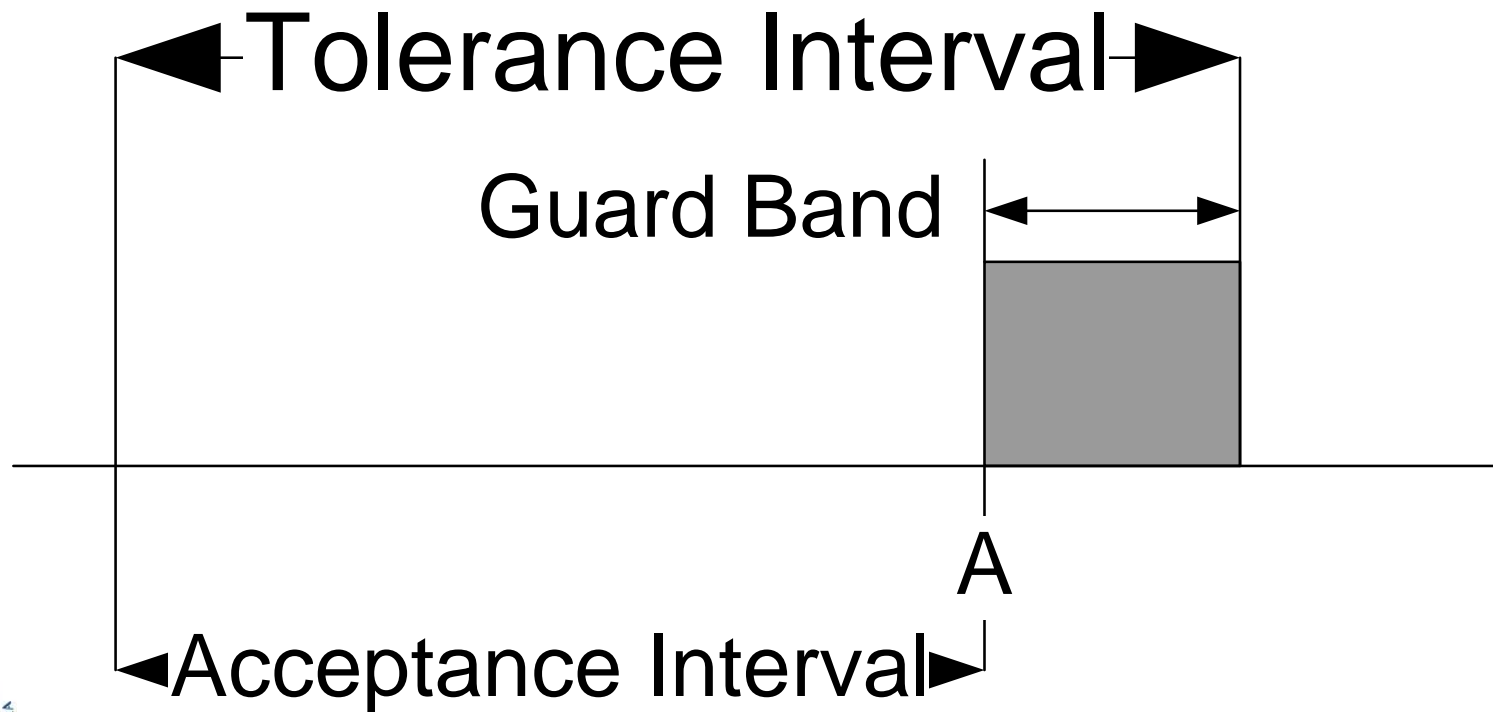
- Knowledge of Measurand – GUM
 - Conditional PDF
 - Poor knowledge – broad PDF
 - Measurements sharpen PDF
 - Measurement effectively updates pre-measurement (prior), yielding post measurement (posterior) & includes measurement data.
 - Bayes theorem (conditional probability)

- Decisions to be made
 - Accept item
 - Reject item
 - Perform another measurement

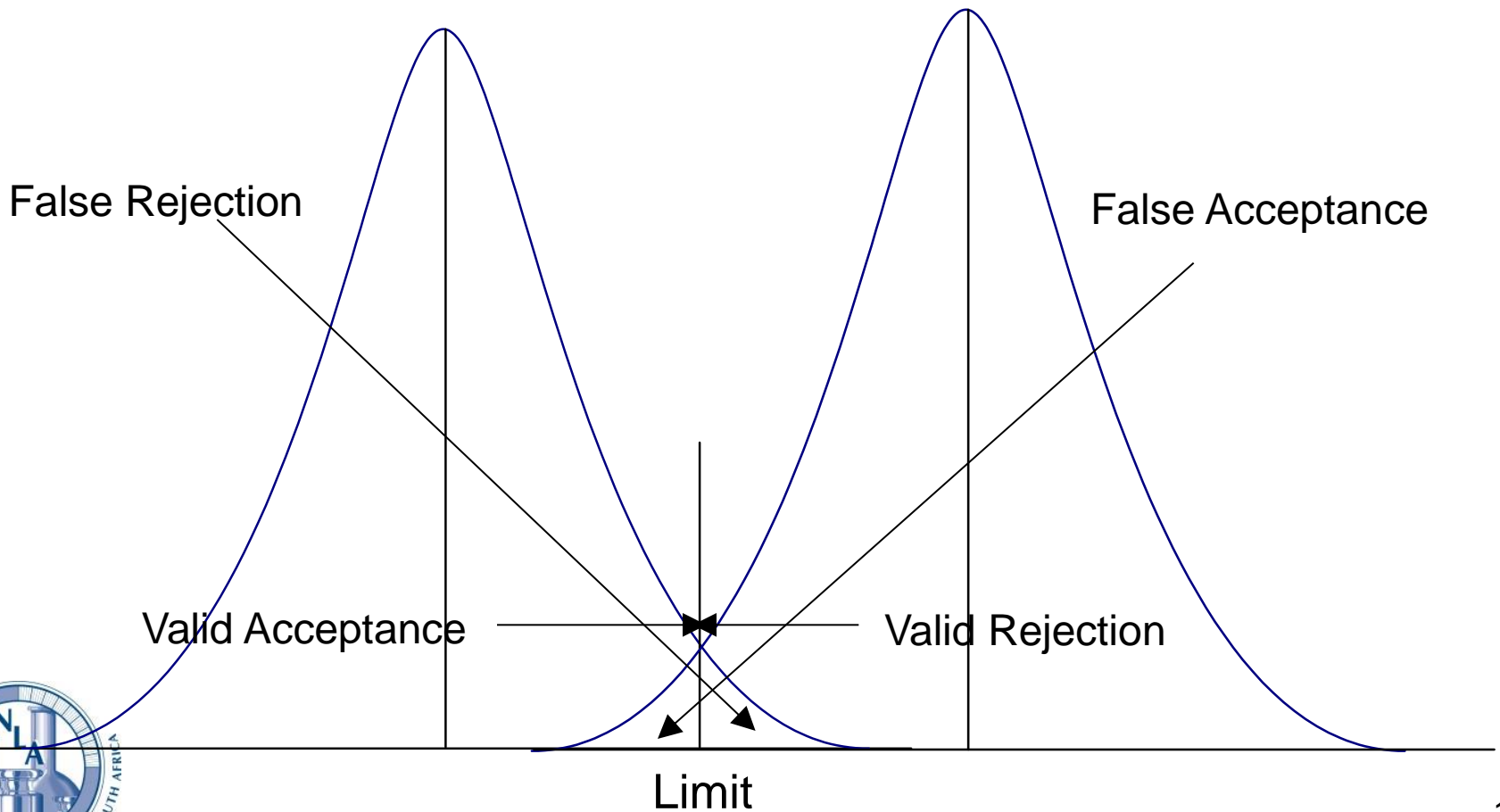
- Consumer / Producer Risk
 - Valid Acceptance
 - False Acceptance
 - Valid Rejection
 - False Rejection

- Probability of conformance





- Risk



- Summary

- Importance of UoM
- Guidelines

BIPM JCGM 106 (Evaluation of measurement data
– The role of MU in CA) <http://www.bipm.org>

Thank you

