

Measurement uncertainty – Decision Rule				
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This decision rule is to be handed over to the customer as part of the order confirmation if a conformity assessment is requested and no different decision rule has been agreed.

IMA Materialforschung und Anwendungstechnik GmbH (IMA Dresden) carries out technical and scientific testing services for you. As a test laboratory accredited according to DIN EN ISO / IEC 17025: 2018, we have extensive knowledge of measurement methods and their measurement uncertainties.

With the changeover to the above-mentioned version of the accreditation standard, there is a change in the definition of rules as to how this measurement uncertainty is to be taken into account when making statements about conformity.

The measurement uncertainty to be taken into account consists of a large number of individual components. These depend, among others, on the test method and the test equipment used.

The measured value determined is influenced by a large number of steps and each process step contributes to uncertainty. From this, an overall measurement uncertainty contribution is calculated for each test method.

If you commission us with the test to determine a statement of conformity against a limit value or a specification value, the measurement uncertainty must be taken into account.

This consideration is defined in the following decision rule.

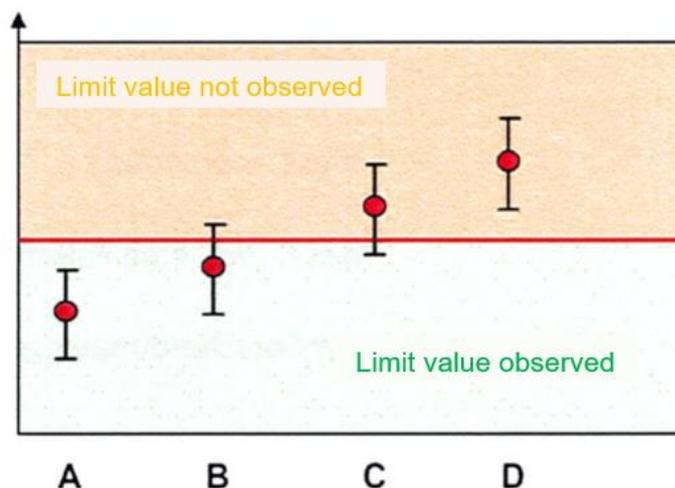


Figure 1: Case distinction of the conformity assessment - decision rule, source: DAkkS

For cases A and D, the measured value including the measurement uncertainty completely exceeds or falls below the limit value. For cases B and C, the measured value is above or below the limit value, but there is a limit case including the measurement uncertainty.

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For this reason, the following decision rule is defined:

No measurement uncertainties are taken into account for the statement on conformity. The requirement is considered fulfilled if the measured value is smaller or larger (depending on whether a minimum or a maximum value is defined) or equal to the limit value.

With this decision rule, depending on the measurement uncertainty of the measured value, there is a risk of false-compliant or false-non-compliant statements (cases B and C).

In the test report, the sentence is added: "In the statement of conformity, the measurement uncertainty of the measured values is not taken into account".

If you commission us with tests without specifying limit values, no conformity assessment will be carried out.

If you would like to evaluate your results yourself, you can ask about our measurement uncertainties. We are happy to answer any questions you may have about this problem.