

Supporting information for

**METROLOGICAL TRACEABILITY OF MEASUREMENT RESULTS
IN CHEMISTRY –**

**CONCEPTS AND IMPLEMENTATION
(IUPAC TECHNICAL REPORT 2011)**

Prepared for publication by

PAUL DE BIÈVRE, RENÉ DYBKAER, ALEŠ FAJGELJ, AND D. BRYNN
HIBBERT

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Concept diagrams

The concepts presented in the report are related to each other in various ways forming a diagram, which, for convenience, has here been cut up in four figures with overlaps.

The three types of relation connecting the concepts are defined by ISO 704 [1] and ISO 1087-1 [2].

- The *generic relation* (or genus-specific relation) that is hierarchical, connecting a superordinate generic concept to two or more subordinate specific concepts, which inherit all characteristics of the former. This relation is shown as a tree, sometimes with a heavy trunk indicating a separate terminological dimension; a short branch with three dots means that other specific concepts exist, but are not presented.
- The *partitive relation* (or part-whole relation) that is also hierarchical, connecting a superordinate concept to two or more partitive concepts, which assembled constitute the former. This relation is shown as a rectangular rake; a continued backline without a tooth means that other, not mentioned partitive concepts exist. Two closed-set teeth show that several partitive concepts of a given type are involved whereas one with broken line indicates two concepts of that type may not be involved.
- The *associative relation* (or pragmatic relation) that is non-hierarchical, connecting two concepts that are in one of many types of association. This relation is shown as a double-headed arrow. For simplicity, only some of the possible association relations are given.

A hyphenated number without parentheses refers to a concept defined in the text.

A parenthetic number indicates a concept undefined in the text, but defined in VIM.

A parenthetic concept is either undefined and assumed to be generally understood (a so-called 'primitive') or is not used in the text, but is included in the diagram for better understanding of concept relations.

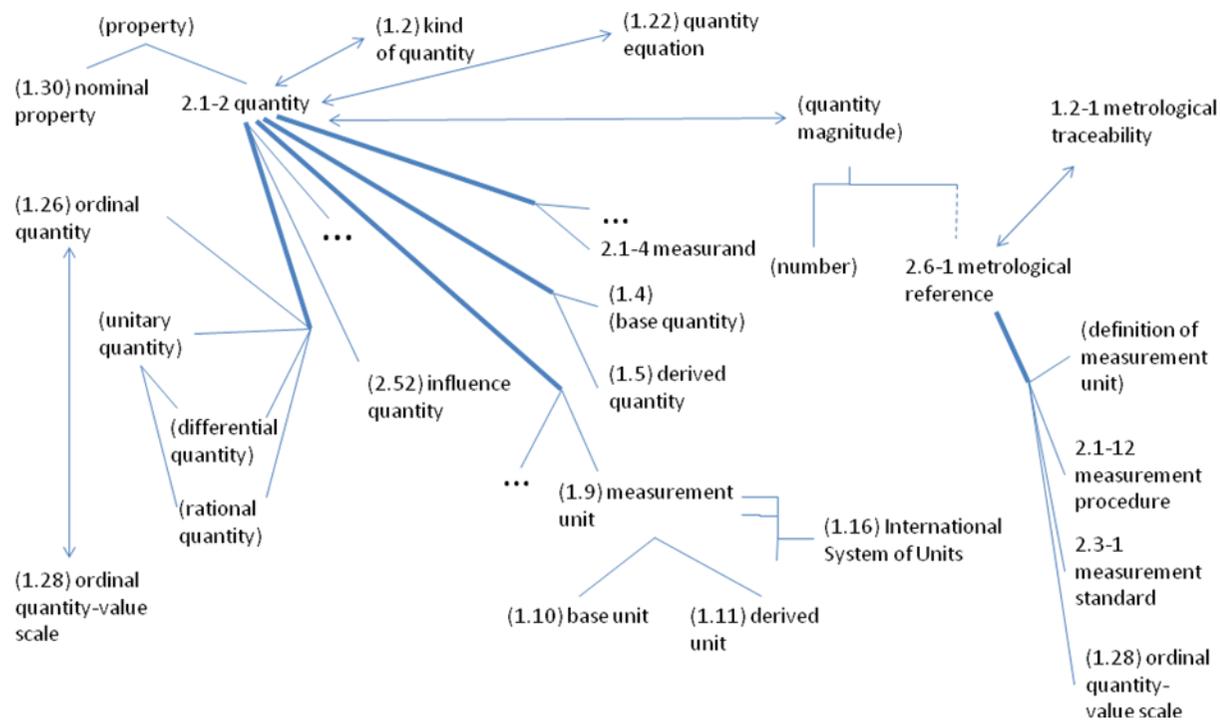


Figure S1: Concept diagram around 'quantity'

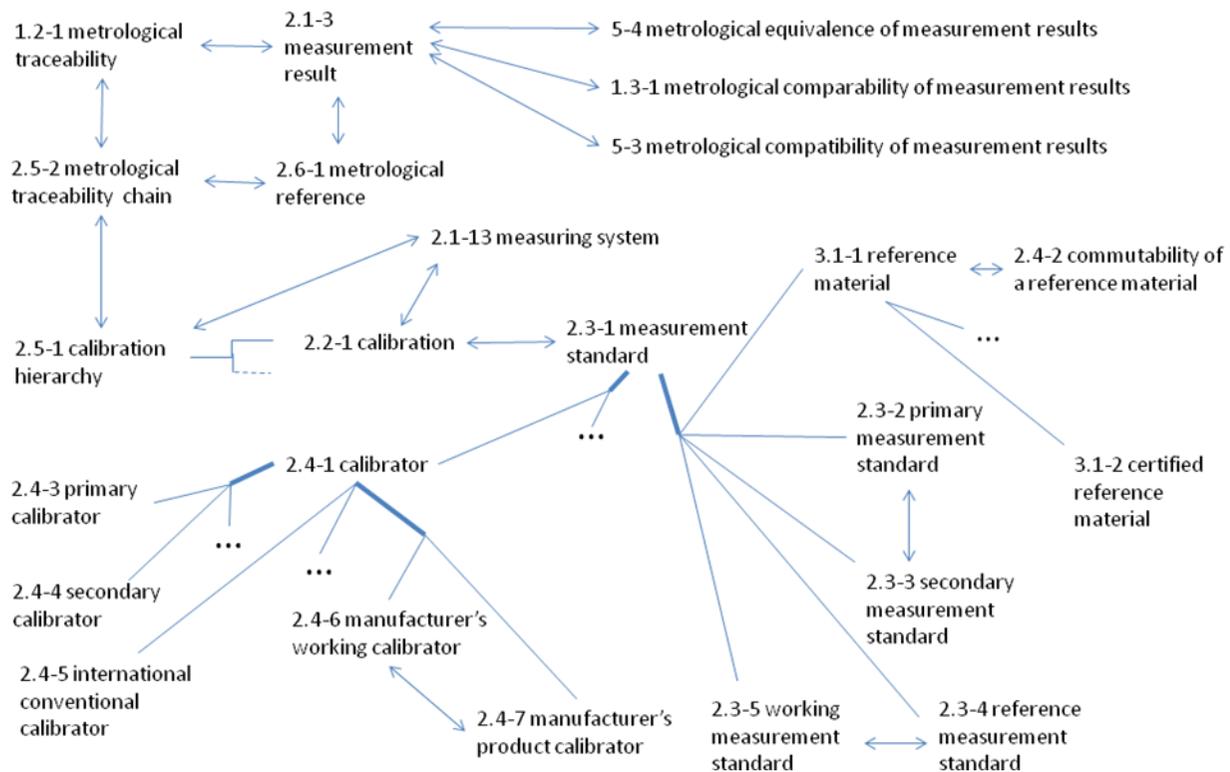


Figure S2: Concept diagram around 'calibration'

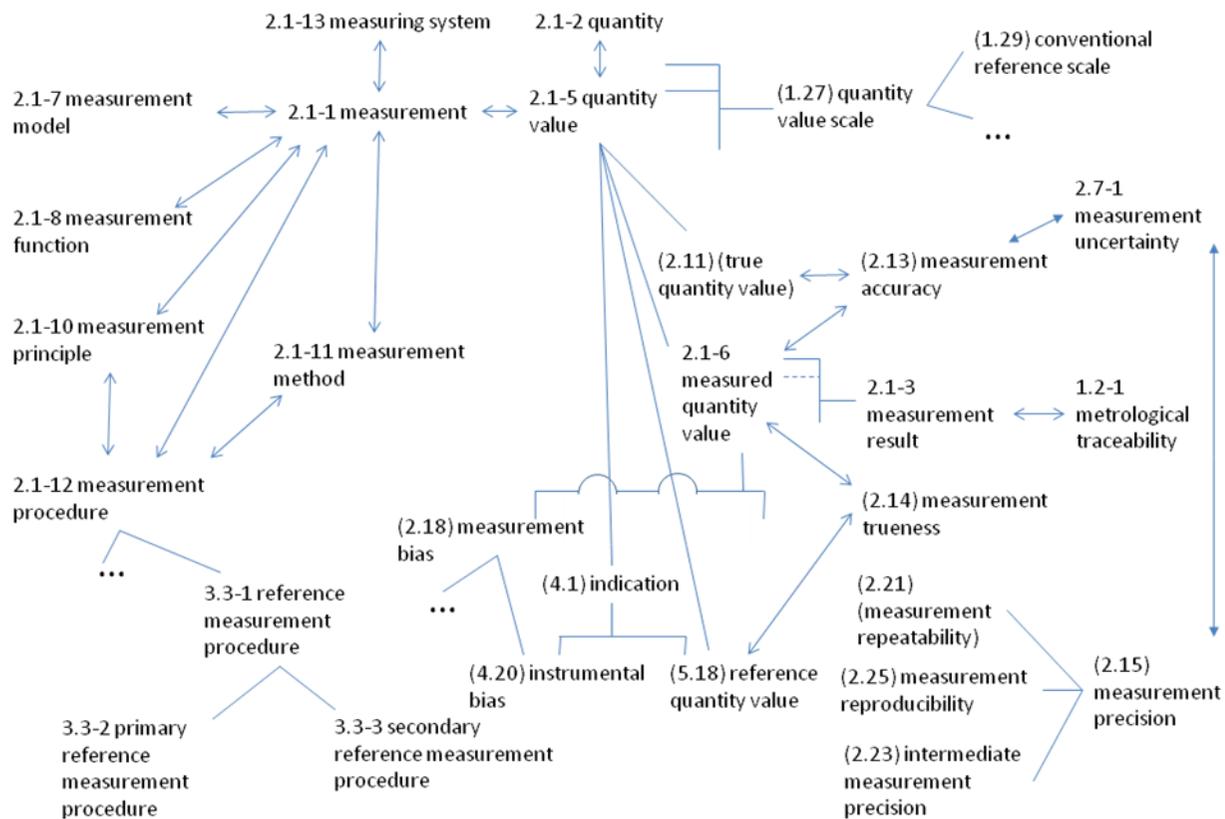


Figure S3: Concept diagram around 'quantity value'

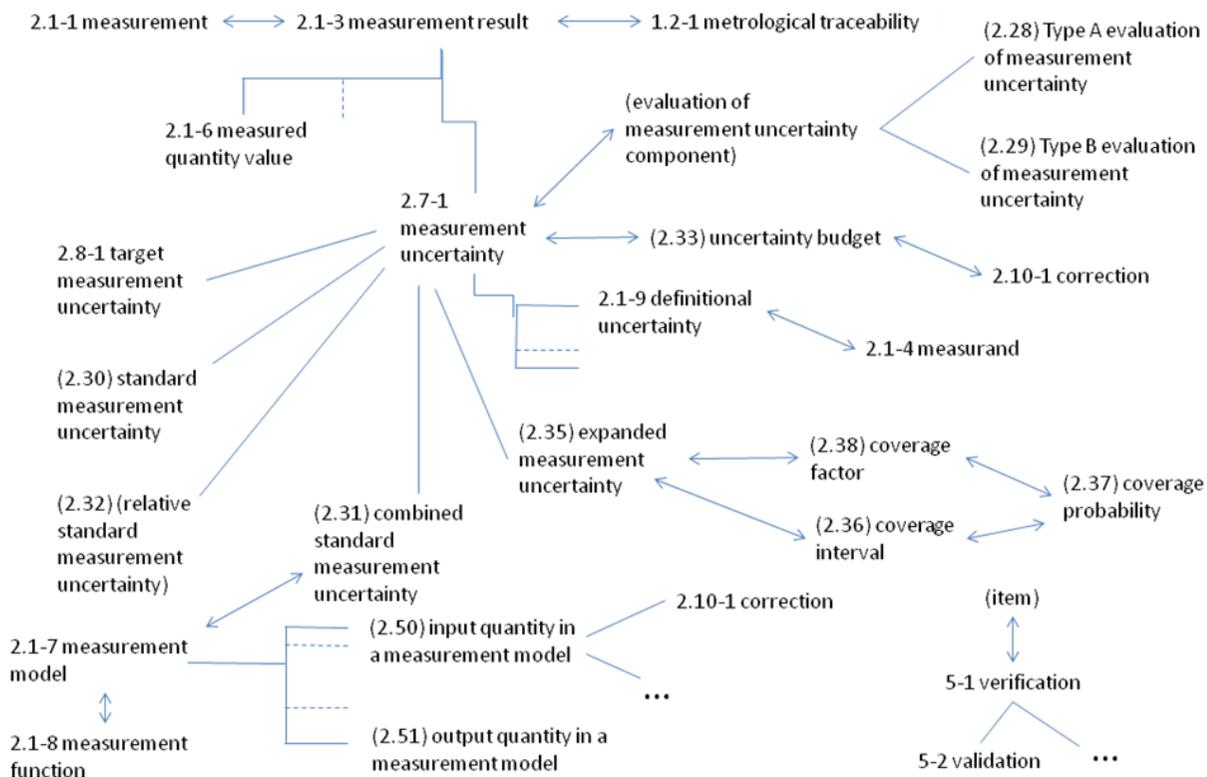


Figure S4: Concept diagram around 'measurement uncertainty'

References

1. ISO. *Terminology work - Principles and methods*, 704:2009, International Organization for Standardization, Geneva.
2. ISO. *Terminology work - Vocabulary - Part 1: Theory and application*, 1087-1:2000, International Organization for Standardization, Geneva.