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plenary lecture at the XXV Latin-American Congress of Chemistry in September 2002, where it resulted in a full and wide-ranging discussion.

The Task Group has now identified a number of key issues, including the range of backgrounds of students entering the course, the stimulation of interest, emphasis on social responsibility, the introduction of material in a regional context, the provision of courses for non-majors and students of the humanities, transferability between courses, and the dissemination of the final recommendations and conclusions. Future discussions will include the identification of essential topics and the number and type of courses. These issues will be explored over the following months and reported on later.

For more information, contact the Task Group Chairman Norma S. Nudelman at <nudelman@qo.fcen.uba.ar>.



www.iupac.org/projects/2002/2002-010-1-050.html

Rules for Stating When a Limiting Value is Exceeded

This is a brief summary of an IUPAC activity carried out under the Chemistry and Human Health Division. The former Commission of Toxicology (COMTOX) has established a set of rules for stating whether or not a measurement result is in conformity with given specifications.

Conformity testing is a systematic examination of the extent to which a measurement result indicates that the value of the measurand (e.g., the concentration of a substance in a matrix) conforms or not with a given limiting value. This procedure has some very well-known and practical applications, such as detecting doping in sports, alcohol levels in drivers' blood, levels of toxic metals in workers' blood, the proportion of gold in alloys, and the amount of pesticides in drinking water. The objective of the rules for stating when a limiting value is exceeded is to provide assurance of conformity, either in the form of a supplier's declaration, or of a third-party certification. A specification is usually formulated as a single limiting value or upper and lower limiting values. The assurance may be in the form of a supplier's declaration or of a third-party certification.

When conformity testing involves measurement or sampling uncertainty, it is common practice to use elements from the theory of statistical hypothesis testing to provide a formal procedure. If you know the meas-

urement procedure and if you can determine a level of uncertainty for that measurement, you can also estimate and minimize the risk of making errors in claims of conformity or non-conformity to the particular specifications. The description of the rules was published by Christensen et al. (Christensen JM, Holst E, Olsen E, Wilrich PT. Rules for stating when a limiting value is exceeded. *Accred. Qual. Assur.* 7, 28-35 [2002]).

Test for Conformity Versus Test for Non-Conformity

Different tests exist for conformity and non-conformity. Which one you use depends on the consequences of a wrong statement. An example of a test for conformity is an investigation of the amount of poesticide in a drinking water supply system that serves several hundred thousand people. A declaration that the concentration of the pesticide is below the limiting value—i.e., the point at which that water supply is deemed unsafe—should be made with great confidence. On the other hand, a test for non-conformity might involve measuring the alcohol concentration in a driver's blood. A declaration that the blood-alcohol concentration in a particular driver exceeds the limiting value—i.e., that person is driving while drunk—should also be made with great confidence.

A test for conformity must always result in only one of the following statements:

- **Statement A:** The measurement results have demonstrated beyond any reasonable doubt that the value of the measurand is in conformity with the requirement.
- **Statement B:** The measurement results have demonstrated beyond any reasonable doubt that the value of the measurand is not in conformity with the requirement.
- **Statement C:** The measurement results have not been able to demonstrate beyond any reasonable doubt whether the value of the measurand is or is not in conformity with the requirements.

The rules for testing conformity are as follows:

Rule 1: For a one-stage testing procedure, conformity with the requirements is declared, if and only if, the uncertainty interval for the value of the measurand is inside the region of conformity.

Rule 2: For a two-stage testing procedure, conformity with the requirements is declared, if and only if, the uncertainty interval for the value of the measurand is inside the region of conformity either after the first stage or after the second stage. The second stage of the test is performed if, and only if,

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the uncertainty interval calculated after the first stage includes a specification limit.

The power function of the conformity test can be calculated when the uncertainty is known. The power function of the test is the probability of declaring conformity and it is a function of the measurand value. For both the one-stage and the two-stage procedures, formulas for the calculation of the power function and the probability of obtaining an inconclusive result are available at <www.ami.dk/research/conformity>. At the same Web site a freeware computer program, conform1e.exe, is available for the calculations of the probabilities for statement A, B, or C.

The rules described above may assist organizations in making proposals for legislation concerning limiting values. Such organizations may be government agencies, laboratories, or others who are responsible for checking conformity to limiting values by interpreting measurements and taking into account the uncertainty of the results.

For more information, contact the Task Group Chairman Jytte Molin Christensen at <Q-International@wanadoo.fr>.



www.iupac.org/projects/1993/720_4_93.html

Provisional Recommendations

IUPAC Seeks Your Comments

Provisional recommendations are drafts of IUPAC recommendations on terminology, nomenclature, and symbols made widely available to allow interested parties to comment before the recommendations are finally revised and published in *Pure and Applied Chemistry*.

Glossary for Toxicokinetics of Chemicals

This glossary contains definitions of 355 terms frequently used in the multidisciplinary field of toxicokinetics. The glossary is compiled primarily for chemists who currently work in toxicology and require knowledge of the expressions used in toxicokinetics, especially in relation to hazard and risk assessment. Medical terms are included because of their frequent occurrence in the toxicological literature and because chemists would not normally be expected to be familiar with them. There are three annexes, one containing a list of abbreviations used in toxicokinetics, one containing a list of abbreviations of international bodies and legislation that are relevant to toxicology and chemical safety, and one giving sources of interest for further reading.

Comments by 30 September 2003 to:

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www.iupac.org/reports/provisional/abstract03/nordberg_300903.html

Definitions of Terms Relating to Reactions of Polymers and to Functional Polymeric Materials

This document defines the terms most commonly encountered in the field of polymer reactions and functional polymers. The scope has been limited to terms that are specific to polymer systems. The document is organized into three sections. The first defines the terms relating to reactions involving and specific to polymers. Names of individual chemical reactions are omitted from the document, even in cases where the reactions are important in the field of polymer reactions. The second section defines the terms relating to polymer reactants and reactive polymeric materials. The third section defines terms describing functional polymeric materials.

Comments by 31 July 2003 to:

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