

I. Nomenclature, Terminology and Symbols

The Committee has moved forward with a number of strategic organizational changes, designed to allow closer alignment with the Society's mission and goals. Changes to committee duties and responsibilities, as shown in Bulletin 5, were developed and presented to ConC for approval. Committee structure was modified to include sub-committees for major tasks. Subcommittees were constituted by self-selection of members.

Chemical nomenclature has become an integral part of the informatics revolution. Proper nomenclature is necessary to ensure identification of chemical substances in numerous databases. With this in mind, a thorough review of electronic methods for generating chemical nomenclature was undertaken. When completed, the results will be posted on the Committee's website.

The most significant changes to nomenclature, terminology, and symbols currently under consideration involve the international system of units (SI). Of particular concern to chemists, the definitions of the kilogram and mole will undergo significant modifications in the "New SI". The existing definition of the kilogram (the physical platinum-iridium cylinder and its clones) has become problematic for a number of reasons, and the need for its replacement has been discussed for many years. The proposal for a new kilogram is based on defining the numerical portion of Planck's constant as an exact number. This definition is planned to be realized by means of existing and future experimental methods. Conditions for approval of this definition, based on a target experimental uncertainty on the order of 50 parts per billion, have not yet been achieved.

The proposed new definition of the mole is based on defining the numerical part of the Avogadro constant as an exact number. In effect, the mole will then become the amount of substance that contains Avogadro's number of elementary entities. Recall that the present definition of the mole is the amount of substance that contains as many elementary entities as there are atoms in 0.012 kilogram of carbon-12. Note that the exact number of such entities is not currently specified. This definition will have the consequence that the mass of a single carbon-12 atom will no longer be known exactly (by definition), and will be an experimental quantity with some (small) uncertainty. NTS has been keeping abreast of developments in each stage of the New SI process. Our committee continues to study the effects these changes in definitions will have on the chemical community, if and when they are implemented. A NTS task force is preparing a summary of "The New SI", to help explain the system to chemists, teachers of chemistry, and students.

NTS is working along several fronts to increase the visibility of ACS in international matters dealing with nomenclature, through contact with representatives serving on various IUPAC committees.

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