

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*.

Nomenclature of Cyclic Peptides

These recommendations extend rule 3AA-19.5 of the Nomenclature and Symbolism for Amino Acids and Peptides (Recommendations 1983) to cover all classes of cyclic peptides. They include rings generated from an acyclic peptide by formation of a peptide or ester bond, by a disulfide link, or by a new carbon carbon, carbon-nitrogen, nitrogen-oxygen, or carbon-sulfur bond (not esters or amides). These new bonds are indicated by the prefix anhydro, cyclo, or epoxy, or combinations of them. The inclusion of modified standard amino acids or amino acids not related to standard amino acids is considered. Any stereochemistry generated by ring formation is indicated using standard organic conventions.

Comments by 31 March 2005

Dr. Gerard P. Moss
Queen Mary, University of London
Department of Chemistry
Mile End Road
London, E1 4NS, United Kingdom
TEL.: +44 (20) 7882 3262
FAX: +44 (20) 7882 7794
E-MAIL: g.p.moss@qmul.ac.uk



www.iupac.org/reports/provisional/abstract04/moss_310305.html

Nomenclature of Organic Chemistry

For nomenclature purposes, a structure containing at least one carbon atom is considered to be an organic compound. The formation of a systematic name for an organic compound requires selection and then naming of a parent structure. This basic name may then be modified by prefixes, infixes, and, in the case of a parent hydride, suffixes, which convey precisely the structural changes required to generate the compound in question from the parent structure. In contrast to such systematic names, there are traditional names which are widely used in industry and academic circles. Examples

are acetic acid, benzene, and pyridine. Therefore, when they meet the requirements of utility and when they fit into the general pattern of systematic nomenclature, these traditional names are retained.

A major new principle is elaborated in these recommendations. The concept of “preferred IUPAC names” is developed and systematically applied. Up to now, the nomenclature developed and recommended by IUPAC has emphasized the generation of unambiguous names in accord with the historical development of the subject. In 1993, due to the explosion in the circulation of information and the globalization of human activities, it was deemed necessary to have a common language for use in legal situations, with manifestations in patents, export-import regulations, environmental and health and safety information, etc. However, rather than recommend only a single “unique name” for each structure, we have developed rules for assigning “preferred IUPAC names,” while continuing to allow alternatives in order to preserve the diversity and adaptability of the nomenclature to daily activities in chemistry and in science in general.

This book (Recommendations 2004) covers and extends the principles, rules and conventions described in two former publications: *Nomenclature of Organic Chemistry*, 1979 Edition, and *A Guide to IUPAC Nomenclature of Organic Compounds*, Recommendations 1993. In a few instances, the 1979 rules and the 1993 recommendations have been modified to achieve consistency within the entire system. In case of divergence among the various recommendations, Recommendations 2004 prevail.

Comments by 31 March 2005

Prof. Henri A. Favre
2031 Rue Leclaire
Montréal, QC H1V 3A1, Canada
TEL.: +1 514 259 7963
E-MAIL: halfa@contact.net



www.iupac.org/reports/provisional/abstract04/favre_310305.html