the inherent numbering of the simplified skeleton and the seniority of the rings and ring systems in the phane parent hydride. The locants within the parentheses specify the atoms of the ring structure specified by the amplification prefixes that are linked to the adjacent normal atoms of the simplified parent skeleton.

In addition to the basic principles, rules and conventions of Phane Nomenclature, Part I [*Pure Appl. Chem.* 70(8), 1513-1545 (1998)] contains the fundamental methodology for numbering phane parent hydrides and the application of skeletal replacement (“a”) nomenclature for naming heterophane parent hydrides.

Part II of Phane Nomenclature describes derivatives of phane systems formed by substitutive nomenclature. The following nomenclatural features are described: indicated and added hydrogen, order of seniority for numbering, substituents expressed as suffixes, substituents cited as prefixes, phane parent hydrides modified by addition or subtraction of hydrogen atoms, and polyfunctional derivatives.

www.iupac.org/publications/pac/2002/7405/7405x0809.html

Harmonized Guidelines for Single-Laboratory Validation of Methods of Analysis (IUPAC Technical Report)

by M. Thompson, S. L. R. Ellison, and R.Wood
Pure and Applied Chemistry, Vol. 74, No. 5, pp. 835-855 (2002)

Method validation is one of the measures universally recognized as a necessary part of a comprehensive system of quality assurance in analytical chemistry. In the past, ISO, IUPAC, and AOAC International have cooperated to produce agreed protocols or guidelines on the “design, conduct and interpretation of method performance studies,” on the “Proficiency testing of (chemical) analytical laboratories,” on “internal quality control in analytical chemistry laboratories,” and on “the use of recovery information in analytical measurement.” The Working Group that produced these protocols/guidelines has now been mandated by IUPAC to prepare guidelines on the single-laboratory validation of methods of analysis. These guidelines provide minimum recommendations on procedures that should be employed to ensure adequate validation of analytical methods. A draft of the guidelines has been discussed at an International Symposium on the Harmonization of Quality Assurance Systems in Chemical Laboratory, the proceedings from which have been published by the UK Royal Society of Chemistry.

www.iupac.org/publications/pac/2002/7405/7405x0835.html

Polyaniline. Preparation of a Conducting Polymer (IUPAC Technical Report)

by J. Stejskal and R. G. Gilbert
Pure and Applied Chemistry, Vol. 74, No. 5, pp. 857-867 (2002)

Eight persons from five institutions in different countries carried out polymerizations of aniline following the same preparation protocol. In a “standard” procedure, aniline hydrochloride was oxidized with ammonium peroxydisulfate in aqueous medium at ambient temperature. The yield of polyaniline was higher than 90% in all cases. The electrical conductivity of polyaniline hydrochloride thus prepared was 4.4 ± 1.7 S cm^{-1} (average of 59 samples), measured at room temperature. A product with defined electrical properties could be obtained in various laboratories by following the same synthetic procedure. The influence of reduced reaction temperature and increased acidity of the polymerization medium on polyaniline conductivity were also addressed. The conductivity changes occurring during the storage of polyaniline were monitored. The density of polyaniline hydrochloride was 1.329 g cm^{-3}. The average conductivity of corresponding polyaniline bases was 1.4×10^{8} S cm^{-1}, the density being 1.245 g cm^{-1}. Additional changes in the conductivity take place during storage. Aging is more pronounced in powders than in compressed samples. As far as aging effects are concerned, their assessment is relative. The observed reduction in the conductivity by ~10% after more than one-year storage is large but, compared with the low conductivity of corresponding polyaniline (PANI) base, such a change is negligible. For most applications, an acceptable level of conductivity may be maintained throughout the expected lifetime.

www.iupac.org/publications/pac/2002/7405/7405x0869.html

Studies on Biodegradable Poly[hexano-6-lactone] Fibers. Part 3. Enzymatic Degradation in Vitro (IUPAC Technical Report)

by T. Hayashi, K. Nakayama, M. Mochizuki, and T. Masuda
Pure and Applied Chemistry, Vol. 74, No. 5, pp. 869-880 (2002)

This report describes how poly(hexano-6-lactone) (PCL) fibers were enzymatically degraded by a hydrolase in vitro. The extent of degradation of PCL fibers was examined by weight loss, mechanical properties loss such as tensile strength and ultimate elongation decreases, and visual observations by scanning electron