Properties and Units for Transfusion Medicine and Immunohematology

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Pure and Applied Chemistry
Vol. 75, No. 10, pp. 1477–1600 (2003)

Basic research in biology and medicine and innovations in laboratory methodology have increased greatly the range of properties available to medical staff to help them in decisions involving the diagnosis and prevention of disease and the treatment of patients. The plethora is now such that the individual doctor may have insight into or understanding of only a few of the properties offered to him from the various clinical laboratory specialties. Further, recent developments tend to blur the boundaries between the various disciplines of clinical laboratory sciences; the same properties are being reported differently in different disciplines.

The terminology used by one laboratory specialty may vary even within the specialty, and even be incomprehensible to another area. This is a minor inconvenience to the laboratory specialties, each being concerned essentially with its own area of activity. However, for the user, this is unsatisfactory and it may even hinder treatment of the patient.

To alleviate this problem, coding schemes combining a definition of a specific property with a particular code have been developed in the various specialties of the domain of clinical laboratory medicine. This allows the requester of analyses, and the producer and the receiver of the results, to express the concept as is most convenient locally.

Often the format of presentation is restricted by the number of signs allocated for this purpose in the database. For example, the definition "Blood (capillary Blood)-Glucose; substance concentration = ? mmol/l" is coded by NPU10113. A request for "Blood sugar" identified by the code NPU10113, may be reported back as "NPU10113: B(cB)-Glucose; subst.c. = 6,5 mmol/l" or "NPU10113: 6,5", and be registered in the patient file of a general practitioner as "NPU10113: Gluc. 6.5". The concept identified by "Erythrocytes(Blood)-Erythrocyte antigen; taxon(AB0;RhD; procedure) = ?" is coded by NPU01945. A request for "NPU01945 blood-typing" may elicit the report "NPU01945: Ercs(B)-Erythrocyte antigen; taxon(AB0; RhD; proc.) = A; RhD negative", and be registered in the patient file as "NPU01945: A; RhD negative".

Each of the clinical laboratory specialties adapts well to the general structure for presentation of properties and the adhering kinds-of-property. However, often a particular kind-of-property, not used in any other specialty, is required; for transfusion medicine and immunohaematology the kind-of-property "compatibility" is unique.

The coding scheme for clinical laboratories is operating in Denmark and in Sweden. It has shown both practicability and usefulness; it has eliminated a number of ambiguous presentation formats and it adapts well to electronic patient records.

This document is part of an ongoing effort to standardize transmission of laboratory data across cultural and linguistic domains, without attempting to standardize the routine language used by clinicians and laboratory practitioners. It comprises a general introduction and an alphabetic list of properties. The list is based on the syntax for properties recommended by the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) and IUPAC. The nomenclature is primarily from the Working Party on Terminology of the International Society of Blood Transfusion.

A manuscript on molecular biology has been finalized and is pending acceptance by IUPAC and IFCC. If it is accepted, the coding scheme covers clinical chemistry, with the exception of chromosome studies and the molecular biology of mitochondria. The scheme comprises some 35 000 entries, or sets of definition and code.

www.iupac.org/publications/pac/2003/7510/7510x1477.html

Implications of Endocrine Active Substances for Humans and Wildlife

A special topic issue edited by J. Miyamoto and J. Burger

Pure and Applied Chemistry
Vol. 75, Nos. 11–12, pp. 1617–2615 (2003)

Understanding the scientific issues surrounding endocrine-active substances (EASs) is an international priority. Endocrine disruptors affect not only humans, but also other living organisms. They affect not only our generation, but also future generations. Though the adverse effects of endocrine disruptions (EDs) were noted as far back as 30 years ago, inten-