



International Union of Pure and Applied Chemistry

A member of the International Council of Scientific Unions

Clinical Chemistry Section (VII.C)

Commission on Nomenclature, Properties and Units (C-NPU; VII.C.1)

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Minutes of meeting, Geneva, 1997-08-24/26

Present:

Members: Desmond Kenny (DK, chair), René Dybkær (RD), Clement Mc Donald (CM), Xavier Fuentes-Arderiu (XFA), Pedro Soares de Araujo (PS).

Associate members: Henrik Olesen (HO) (minutes secretary), Antonin Jabor (AJ).

Guests: Claus Heuck (CH; WHO), Anders Kallner (AK), Peter Lehmann (PL), Bob Moran (BM; ASTM; NCCLS), Robert Zender (RZ).

Regrets: Gilbert Hill (GH).

0. The chairman called the meeting to order at 09:15, and welcomed members and guests to the meeting.
1. The provisional agenda, previously circulated, was approved.
2. **Minutes of C-NPU meeting, Copenhagen, 1997-05-02/04**
The minutes of the Copenhagen meeting 1997-05-02/04 were approved after minor revisions. The secretary will distribute a clean copy of these minutes.
3. **Member reports**
 - 3.1 AJ informed that the Czech Ministry of Health respected ENV 1614 (Healthcare informatics - Structure for nomenclature, classification, and coding of properties in clinical laboratory sciences). Next step will be translation of IUPAC-IFCC coding system.
 - 3.2 CM. The LOINC vocabulary and coding schemes are now freely accessible on Internet ([http:// dumccss.mc.duke.edu/standards/HL7/termcode/loinclub](http://dumccss.mc.duke.edu/standards/HL7/termcode/loinclub)) and are being used by 12 major US firms. Apart from laboratory properties a series of properties and codes for clinical signs have been added.
[Clem: you also mentioned Stan Huff and HL7. Formulation?]
 - 3.3 PS. A meeting on the presentation of medical reports in South America was planned for in April 1997 but did not happen. The subject is on hold. It is in some way related to "Mercosur", the "free-trade" co-operation in South America.

4. Status reports/Review of projects

4.1 Project 18/87 Properties and units in the clinical laboratory sciences:

- II. Kinds-of-property. Recommendations 1996. D Kenny, H Olesen
IUPAC: Pure and Appl Chem 1997; 69 (5): 1015-42.
IFCC: Eur J Clin Chem Clin Biochem 1997; 35 (4): 317-44.
- III. Elements (of properties) and their code values. Technical report 1997. I Bruunshuus, H Olesen, I Ibsen.
IUPAC: Pure and Appl Chem 1997.
IFCC: Internet Home page 1997-07-01.
- IV. Properties and their code values. Technical report 1997. H Olesen, I Bruunshuus, I Ibsen, K Jørgensen, R Dybkær, Xavier Fuentes-Arderiu, Gilbert Hill, Pedro Soares de Araujo, Clement McDonald.
IUPAC: Pure and Appl Chem 1997.
IFCC: Internet Home page 1997-07-01.
- VI. Properties and units in IOC prohibited drugs. Recommendation 1996. H Olesen, D Cowan, I Bruunshuus, K Klempel, G Hill.
IUPAC: Pure and Appl Chem 1997; 69 (5): 1081-1136.
IFCC: Eur J Clin Chem Clin Biochem 1997; 35 (10): 805-31.
- VII. Properties and units in inborn errors of metabolism. G Hill, D Kenny, H Olesen.
IUPAC: stage 1, draft 0.
IFCC: stage 1, draft 0.
- VIII. Properties and units in bacteriology. Recommendation. U Forsum, H Olesen, W Frederiksen, J Blomberg, B Persson.
IUPAC: stage 2
IFCC: stage 2
There is still need for improvements before publication.
- IX. Properties and units in trace elements. Technical report 1997. R Cornelis, X Fuentes-Arderiu, I Bruunshuus, D Templeton.
IUPAC: Pure and Appl Chem 1997.
IFCC: Eur J Clin Chem Clin Biochem 1997; 35 (10): 833-43.
- X. Properties and units in general clinical chemistry. Recommendation. H Olesen, I Ibsen, I Bruunshuus, D Kenny, R Dybkær, X Fuentes-Arderiu, G Hill, P Soares de Araujo, C McDonald.
IUPAC: stage 2 - 1997-08-20.
IFCC: stage 2 - 1997-08-20.
A series of changes were made. A new draft to be distributed for commenting by C-NPU.
- XI. Coding systems - structure and guidelines. Technical report. H Olesen, D Kenny, X Fuentes-Arderiu, P Soares de Araujo, G Hill, C McDonald, R Dybkær, I Ibsen.
IUPAC: stage 2, draft 9, 1997-08.
IFCC: stage 2, draft 9, 1997-08.
A draft 10 is to be distributed for more comments.

- XII. Properties and units in pharmacology and toxicology. Recommendation. H Olesen, D Cowan, R de la Torre, I Bruunshuus, M Rohde, D Kenny.
 IUPAC: stage 1, draft n, 1997-04
 IFCC: stage 1, draft n, 1997-04
 Is pending finalisation of the list of properties.
- XIII. Properties and units in reproduction and fertility. Technical report 1997. H Olesen, A Giwercman, DM de Krester, D Mortimer, H Oshima, P Troen.
 ISA: For publication 1997-09-09.
 IUPAC: Pure and Appl Chem 1997.
 IFCC: For publication 1997-07-09.
- XIV. IFCC-IUPAC Home page. H Olesen, I Ibsen, D Kenny, X Fuentes-Arderiu, P Soares de Araujo, G Hill, C McDonald, R Dybkær, I Bruunshuus.
 Transferred to Project 27/95.
- XV. IFCC-IUPAC Coding scheme databases. H Olesen, I Bruunshuus, I Ibsen.
 Transferred to Project 27/95.
- XVI. Properties and units in allergology. I Bruunshuus, L Poulsen, et al.
 IUPAC: stage 1, draft 0
 IFCC: stage 1, draft 0
- XVII. Properties and units for calculi. T Bulková, A Jabor, M Zámečník, B Friedecký.
 IUPAC: stage 1, draft 1
 IFCC: stage 1, draft 1
 A draft was presented by AJ and discussed extensively. After some changes and reorganisation of the manus, it is for others with a special interest in the topic to comment.

4.2 Project 24/97. Basic metrological concepts and definitions in clinical laboratory sciences.
 This project is still on hold, pending a new version of VIM.

4.3 Project 25/97. Properties and units in molecular biology. PS presented a first draft, which was appreciated and commented on. Next version for meeting 1998-03.

4.4 Project 26/97. Properties and units in flow cytometry.
 There was no report on this project.

4.5 Project 27/95. C-NPU World Web server.

A suggestion for restructuring was presented at the Internet facilities available for the General Assembly. Changes will be made according to proposals and when accepted by C-NPU a transfer to the IUPAC Web site in North Carolina is aimed at (in the Spring of 1998?).

Present address is http://inet.uni-c.dk/home/ifcc_iupac_cnpu/

4.6 Petition. A special name for the SI coherent derived unit of measurement 'mole per second' when used in expressing 'catalytic activity'.
 RD presented a draft which will be amended and forwarded to the chairman.

5. Organisations: contacts and meetings

5.1 LOINC. Similarities and differences between the coding systems of LOINC and IUPAC were discussed in connection with the discussion on the various parts of the ongoing projects.

Differences between the two systems are grounded on variance in scope, less on differences in actual content. Thus there is much to be gained in cross-fertilisation, without cross-identification. For example, LOINC has more detail on procedures, while the C-NPU scheme has more detail on code values for elements of properties.

5.2 Joint Committee for Guides in Metrology (JCGM). There has been no significant activity.

- 5.3 IUPAC-IUBMB Joint Commission on Biochemical Nomenclature (JCBN). Draft minutes for the 1997 JCBN meeting, held at the Bethesda Ramada Hotel, 8400 Wisconsin Avenue, Bethesda, Maryland 20814, USA, 9:00 am Saturday 24 May to midday Monday 26 May 1997.

10.3.7 Collaboration with the Committee on Nomenclature, Properties and Units (C-NPU; Tipton; Gilbert Hill). Gilbert Hill elaborated on the interests of CNPU (<http://inet.uni-c.dk/~qukb7642/> [alias: http://inet.uni-c.dk/home/ifcc_iupac_cnpu/]), which consists of representatives from the International Union of Pure and Applied Chemistry (IUPAC) and the International Federation of Clinical Chemistry (IFCC), on the use of EC numbers as identifiers in clinical chemistry. He emphasized that the committee did not create recommended names for entities and the credibility of their Quantities and Units numbers (QU numbers) relied on recommendations of other official organizations including JCBN. QU numbers were only assigned in cases where no available classification was possible for entities of interest to clinical chemists. C-NPU would be delighted to eliminate QU numbers by incorporating officially approved alternatives. However, in many cases this was difficult (e.g. isoenzymes). For many isoenzymes of clinical interest, no EC no. was available. CNPU would like guidance on what to do in these cases (Action: all members). It was felt that the introduction of QU numbers in the electronic version of the Enzyme Nomenclature would add an unmanageable level of complexity to the database. Tipton believed that it would not be a problem, however, to add a statement to entries in the printed version of the list to the following effect: "The human isoenzymes of this entry have important implications in the clinical sciences. Readers are directed to the URL http://inet.uni-c.dk/home/ifcc_iupac_cnpu/ for more information". Tipton estimates that 16 entries in the Enzyme Nomenclature book will require this statement (Action:Tipton).

NOTE that a complete draft is available at <http://www.unizh.ch/ejb/draftmin.html>.

GH attended the meeting and extracted the above from the 98 kB document prepared by the scribe, Barry Whyte.

- 5.4 WHO. Claus Heuck indicated that there is a need for harmonisation of definitions of terms. Dr. P Lewalle, WHO terminology, is assembling definitions; especially definitions expressed in different languages for use in translations, and for use in developing countries. The ISO document definitions are not always sufficient in health care, for example definition of the basic term "screening" (<blood transfusion> <epidemiology> <privacy> etc.). XFA mentioned the need for harmonisation of terms for hormones between WHO/INN and IUPAC.

- 5.5 IUPAC/C-TOX and C-NPU. Members of the two commissions met on 1996-08-25 and exchanged information on ongoing projects. For details see the respective minutes from the two commissions. Topics for common projects were suggested:

a. Endocrine disrupters

b. XFA and JH Duffus: Metrological concepts and toxicology.

Doug Templeton et al. are elaborating a document on "IUPAC guidelines for terms related to speciation and fractionation of elements: Definitions, structural aspects and analytical methods"

Rita Cornelis pointed out the need to follow ISO 10241 and 5725 series (cc. Forwarded 1997-12-05).

6. **IFCC and IUPAC**

- 6.1 DK has had informal contact with Mathias Müller (IFCC Vice-president), who has expressed appreciation of the C-NPU activities. A similar view has been expressed by John Ratcliffe (IFCC/SD). IFCC/SD expects a meeting with C-NPU in Sevilla 1998-03-27/30.

- 6.2 IUPAC (DK). Prof. Vermouth has taken over the chair of Division VII, Chemistry and Human Health, after Prof. Donald Moss. It is envisioned that sections will be abolished in 1999 while commissions may continue after restructuring. Emphasis will be on projects related to both medicinal chemistry and clinical chemistry.

At a meeting of Division VII, DK presented the new membership of C-NPU for the period 1998/99 and gave a survey of ongoing and future activities. The survey is incorporated in the minutes point 7 and 11.

7. New projects

- 7.1 Project 24/97. Basic metrological concepts and definitions in clinical laboratory sciences. (RD, XFA). *Collaboration with IFCC.*
- 7.2 Project 25/97. Properties and units in molecular biology. (PS). *Collaboration with IFCC.*
- 7.3 Project 26/97. Properties and units in flow cytometry. (). *Collaboration with IFCC.*
DK mentioned that Martin Rowland has interest in this topic.
- 7.4 Project 27/95. Ongoing activity. Maintenance and update of C-NPU World Wide Web site (HO, RK). *Collaboration with IFCC.*
- 7.5 Project 28/97. Intensional definitions of basic concepts in human health (RD, RK, DK). *Collaboration with WHO and IFCC; requested by WHO.*
- 7.6 Project 29/97. Compilation and clarification of Quality Assurance related nomenclature (RD). *Collaboration with IUPAC Div. V, IFCC, ISO, EURACHEM, AOAC, CITAC, WHO.*
- 7.7 Project 30/97. Inclusion of mass-based properties in the NPU database (HO, RK). *Collaboration with IFCC.*
- 7.8 Project 31/97. Transformation facilities between mass- and amount of substance-based properties (AJ, HO). *Collaboration with IFCC.*
- 7.9 Project 32/97. Properties and units for dynamic function tests (AJ). *Collaboration with IFCC.*
- 7.10. Project 33/97. Petition to Comité Consultatif des Unités about the unit name katal (RD). *Collaboration with IFCC, IDCNS.*
- 7.11. Project 34/97. Metrological concepts and terms in toxicology (XFA). *Collaboration with IUPAC VII.2, IFCC.*
- 7.12. Project 35/97. Harmonisation of coding schemes between IUPAC and LOINC (CM, HO). *Collaboration with LOINC, IFCC.*

8. Recent publications in properties and units

- 8.1 X Fuentes-Arderiu. Informes de laboratorio clínico. Requisitos de elaboración. Norma española 1997.
- 8.2 OM Poulsen, E Holst, JM Christensen. Calculation and application of coverage intervals for biological reference values. *Pure and Appl Chem* 1997; 69 (7): 1601-11.
- 8.3 Jiří Čihař, Ministersva Zdravotnictví České republiky. Metodická opatření 1997.

9. Strategic plan/terms of reference

Discussion deferred.

10. Budget

No significant issues discussed.

11. **Membership (1998-1999)**

Titular members:

Xavier Fuentes-Arderiu (ES, chairman)
Pedro Soares de Araujo (BR, secretary)
René Dybkær (DK)
Clement McDonald (US)
Antonin Jabor (CZ)
R Külpmann (DE)

Associate members:

Henrik Olesen (DK)
Desmond Kenny (IE)
Urban Forsum (SE)
Gunnar Nordin (SE)
Gilbert Hill (CA)

12. **Future meetings**

12.1. The next C-NPU meeting will be in **Sevilla 1998-03-27/30** at the IFCC General Assembly meeting.

12.2. GH will attend a LOINC meeting in Indianapolis on October 30.

13. **Other business**

Not discussed.

14. **Closing**

The meeting closed at 12:00 on 1997-08-26.