

INTERNATIONAL UNION OF PURE  
AND APPLIED CHEMISTRY

CHEMISTRY AND HUMAN HEALTH DIVISION  
CLINICAL CHEMISTRY SECTION  
COMMISSION ON NOMENCLATURE, PROPERTIES AND UNITS (C-NPU)<sup>#</sup>  
(Technical report 1997)

AND

INTERNATIONAL SOCIETY OF ANDROLOGY\*  
(Recommendation 1997)

AND

INTERNATIONAL FEDERATION OF CLINICAL CHEMISTRY  
SCIENTIFIC DIVISION  
COMMITTEE OF NOMENCLATURE, PROPERTIES AND UNITS (C-NPU)<sup>#</sup>  
(Recommendation 1997)

**PROPERTIES AND UNITS IN THE CLINICAL  
LABORATORY SCIENCES:  
Part XIII. Properties and units in reproduction and fertility**

(Technical Report)  
(IUPAC—IFCC 1997)

*Prepared for publication by*

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# Properties and units in the clinical laboratory sciences: Part XIII. Properties and units in reproduction and fertility (Technical Report)

## Synopsis

This document is the first technical report - recommendation on the presentation of properties in reproduction and fertility and their values in clinical laboratory sciences from The International Society of Andrology, International Federation of Clinical Chemistry and International Union of Pure and Applied Chemistry. It forms part of the ongoing effort to standardise requests and reporting of laboratory data for transmission across cultural and linguistic domains, without attempting to standardise the routine language used by clinicians and laboratory practitioners.

The document is accessible on Internet from C-NPU Home page address:  
[http://inet.uni-c.dk/home/ifcc\\_iupac\\_cnpu](http://inet.uni-c.dk/home/ifcc_iupac_cnpu)

## Preface

This document is the result of cooperation between the International Society of Andrology and the Committee/Commission on Nomenclature, Properties and Units of the International Federation of Clinical Chemistry (IFCC) and the International Union of Pure and Applied Chemistry (IUPAC).

The present document is the thirteenth part (XIII) of a series on properties observed in the clinical laboratory sciences, initiated in 1987.

The series will comprise the five general parts (I-IV and XI) and a series of special parts:

- I Syntax and semantic rules [1]
- II Kinds-of-property [2]
- III Elements (of properties) and their code values
- IV Properties and their code values
- V Properties and units in Thrombosis and Haemostasis [3]
- VI Properties and units in IOC prohibited Drugs [4]
- VII Properties and units in Inborn Errors of Metabolism
- VIII Properties and units in Clinical Bacteriology
- IX Properties and units in Trace Elements [5]
- X Properties and units in General Clinical Chemistry
- XI Coding systems - structure and guidelines
- XII Properties and units in Clinical Pharmacology and Toxicology
- XIII Properties and units in Reproduction and Fertility
- XV WWW databases
- XVI Properties and units in Clinical Allergology

## FOREWORD AND SCOPE

Basic research in biology and medicine and innovations in laboratory methodology have greatly increased the range of properties available to medical practitioners to help them in decisions on diagnosis, treatment and prevention of disease.

The plethora is now such that the individual doctor has insight in or understanding of only a limited number of properties offered to him from the various clinical laboratory specialities.

In the laboratory, local terms (jargon) may be well understood among colleagues, but they are not appropriate for communication with the outside world. Likewise, a laboratory and its local community of users, such as hospital or community physicians, may use a "local dialect" of the language of clinical laboratory sciences which is well understood by all concerned, but when the communication possibilities are wider, even transnational, risks of serious misunderstanding arise.

In addition, the terminology used by one laboratory speciality may vary even within the speciality, and may be incomprehensible to another speciality. This is a minor inconvenience to the laboratory specialities, each one essentially operating within its own area of activity. However, for the user this is highly unsatisfactory and also it may hinder treatment of the patient.

It is therefore essential to promote clear, unambiguous, meaningful and fully informative

communication. Also coherence of statements made within and between medical specialities, and uniformity in structure of presentation is to be strived for. This will facilitate transfer of information over cultural, alphabetic and language areas.

The purpose of this document is to apply the IUPAC–IFCC recommended syntax structures [1] for request and report, providing formats and names of properties observed in the domain of Reproduction and Fertility, in order to facilitate unequivocal written or electronic communication between health care professionals.

The list of properties shown in this document is not exhaustive.

The main background document is the WHO laboratory manual for the examination of human semen and sperm-cervical mucus interaction [6].

## STANDARDISED REQUEST AND REPORT OF CLINICAL LABORATORY RESULTS

By convention, properties and results of examinations are represented by the equation:

*Equation 1*

Property = Result

The parts of a request and a report are presented in table 1.

**Table 1. Standard systematic report**

1.	Identification and time
1.1	object or patient identification
1.2	date and time of sampling
2.	Property
2.1	system*
2.2	component <sup>#</sup>
2.3	kind-of-property <sup>§</sup>
3.	Result
3.1	equality, inequality or other operator
3.2	value
3.3	unit
4.	Notes
*	that part of the object or patient to which the property pertains
#	definable part of the system
§	general class of the property

For definition of terms, see [1]

Essential for a *request* (table 1) are part 1 and 2, covering information on patient identification, time or time interval for sampling, and information on the property requested.

The laboratory *report* comprises the three subdivisions 1, 2 and 3.

To each element in part 2 may be added a specification as a parenthetic suffix for clarification and to avoid ambiguity.

Notes (part 4) relating to, for example, diagnosis and medication of patient, haemolysis of sample or hardware breakdown are not included, except when needed for the interpretation of results after pretreatment of patients.

Thus the elements of a term for a type of property comprise:

System(specification)—Component(specification); kind-of-property(specification)

This is as recommended by IFCC and IUPAC [7] and by the European standard ENV 1614:1995 [8].

#### EXAMPLE

[NPU03455]

Semen—Spermatozoa; number concentration

The elements of a result comprise: an operator (= < ≤ > ≥ etc.), a numerical value and a unit, usually in symbolic form. This is as recommended by the European Standard ENV 12435:1996 [9].

#### EXAMPLE

[NPU03455]

= 64 × 10<sup>9</sup>/l

The unit must never be omitted in reporting results, except for the unit '1'.

It is further recommended that the result includes a measure of uncertainty.

In addition to the systematic name of the property, an example and other useful information is given.

## NOMENCLATURE

It is recommended to spell the component name out in full as elemental symbols may not always be known by healthcare personnel. Abbreviations are often used for systems, kind-of-property, and specifications.

## ELEMENTS OF AN ENTRY IN THIS RECOMMENDATION

The terms recommended are given in bold, that is: the systematic term for the type of property, the unit, and the coding scheme identifier with a code value.

- 1 **Name of system and parenthetic specification spelled out in full, and followed by a long dash.**
- 2 **Alphanumeric chemical prefixes to component name.**
- 3 **Recommended name of component and parenthetic specification. Shifted to the left for alphabetical sorting and searching, and followed by a semicolon.**
- 4 **Kind-of-property and parenthetic specification.**
- 5 **Unit.**
- 6 Molar mass *M* for conversion from mass-based kinds-of-property.
- 7 Authority: Code value for the international organisation recommending the component or the combined elements of an entry.

- 8 [NPUXXXXX]  
Coding scheme identifier and code value, intended for interlaboratory transmission between databases.
- 9 Example in abbreviated form. For some, a possible value for the result is included. It does not represent a reference value!

## EXAMPLE

**Semen(Patient identification)+Cervical mucus(Patient identification)—  
Spermatozoal penetration;  
arbitrary property(Kremer; procedure)**

Other term(s): Kremer test

Authority: WHO92; ISA92

Note: scale: Negative Poor Good Excellent or (0 1 2 3)

[NPU08752]

Sem(Pt ID)+CerMu(Pt ID)—Spermatozoal penetration; arb.(Kremer; proc.) = ?

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- [9] CEN/TC 251, 1996. European standard ENV 12435:1996. Medical informatics. Expression of the results measurement in health sciences.

**INDEX OF ABBREVIATIONS**

CAS	Chemical Abstract Service
EC	Enzyme Commission of the International Union of Biochemistry and Molecular Biology. Enzym Nomenclature, Recommendation (1992)
IFCC	International Federation of Clinical Chemistry
IUPAC	International Union of Pure and Applied Chemistry
ISA	International Society of Andrology
IUB	International Union of Biochemistry
MSH	Medical Subject Headings, National Institutes of Health, National Library of Medicine, Bethesda, USA
SI	International System of Units
WHO	World Health Organization

## LIST OF PROPERTIES AND UNITS IN REPRODUCTION AND FERTILITY

**Seminal plasma—**

**Acid phosphatase, prostatic type;**  
**catalytic-activity concentration(37 °C; procedure)**  
 microkatal/litre

Authority: WHO92; ISA92

[NPU01067]

SemP—Acid phosphatase, prostatic type; cat.c.(37 °C; proc.) = ?  $\mu$ kat/l

**Vaginal fluid—**

**Acid phosphatase, prostatic type;**  
**catalytic-activity concentration(37 °C; procedure)**  
 microkatal/litre

Authority: WHO92; ISA92

[NPU01068]

Vagf—Acid phosphatase, prostatic type; cat.c.(37 °C; proc.) = ?  $\mu$ kat/l

**Spermatozoa—**

**Acrosin;**  
**entitic catalytic activity(37 °C; procedure)**  
 attokatal

Authority: ISA92; EC3.4.21.10

[NPU01069]

Sperm.—Acrosin; entitic cat.act.(37 °C; proc.) = ? akat

**Seminal plasma—**

**Adenosin triphosphate;**  
**substance concentration**  
 micromole/litre

*M* = 507,21 g/mol

Authority: WHO92; ISA92; CAS56-65-5

[NPU01082]

SemP—Adenosin triphosphate; subst.c. = ?  $\mu$ mol/l

**Seminal plasma—**

**Adenosinetriphosphatase;**  
**catalytic-activity concentration(37 °C; procedure)**  
 millikatal/litre

Other term(s): Adenylpyrophosphatase; ATPase; ATP monophosphatase; Triphosphatase

Authority: EC3.6.1.3

[NPU01083]

SemP—Adenosinetriphosphatase; cat.c.(37 °C; proc.) = ? mkat/l

**Seminal plasma—**

**Albumin;**  
**substance concentration**  
 micromole/litre

*M* = 66 000 g/mol

Authority: CAS70024-90-7

[NPU01133]

SemP—Albumin; subst.c. = ?  $\mu$ mol/l

**Patient—**

**Amniotic fluid;**  
**relative volumic mass(20 °C/water, 20 °C; procedure)**  
 Authority: MSH94D000653

[NPU010184]

Pt—Amniotic fluid; rel.volumic mass(20 °C/water, 20 °C; proc.) = ?

**Seminal plasma—****Calcium(II; total);****substance concentration****millimole/litre** $M = 40,080 \text{ g/mol}$ **[NPU01444]**

SemP—Calcium(II; total); subst.c. = ? mmol/l

**Seminal plasma—****Carcinoembryonic antigen;****arbitrary substance concentration(IRP 73/601; procedure)****international unit/litre**

Recommended calibrator: WHO 1st IRP 73/601

Other term(s): CEA

**[NPU01479]**

SemP—Carcinoembryonic antigen; arb.subst.c.(IRP 73/601; proc.) = ? int. unit/l

**Seminal plasma—****Carnitine;****substance concentration****millimole/litre** $M = 161,20 \text{ g/mol}$ 

Authority: CAS461-06-3

**[NPU01484]**

SemP—Carnitine; subst.c. = ? mmol/l

**Semen—****Cells other than spermatozoa;****number concentration(list; procedure)**

Authority: WHO92; ISA92

**[NPU01520]**

Sem—Cells other than spermatozoa; num.c.(list; proc.)

**[NPU02595]** Sem—Leukocytes; num.c. = ?  $\times 10^9/l$ **[NPU08718]** Sem—Round cells; num.c. = ?  $\times 10^9/l$ **Cervical mucus—****Cells;****number concentration(procedure)** **$10^6/litre$** 

Other term(s): Leukocytes + other cells; Cellularity

Authority: WHO92; ISA92

**[NPU01519]**CerMu—Cells; num.c.(proc.) = ?  $\times 10^6/l$ **Patient—****Cervical mucus;****volume****millilitre**

Authority: WHO92; ISA92

**[NPU01529]**

Pt—Cervical mucus; vol. = ? ml

**Seminal plasma—****Choriogonadotropin;****arbitrary substance concentration(IS 75/537; procedure)****international unit/litre** $M = 39\,000 \text{ g/mol}$ 

Recommended Calibrator: WHO 3rd IS 75/537

Calibrator(s): WHO 1st IRP 75/537 (for immunoassay; identical to 3rd IS)

Other term(s): hCG

Authority: IUPAC-IUB74; CAS9002-61-3

**[NPU01574]**

SemP—Choriogonadotropin; arb.subst.c.(IS 75/537; proc.) = ? int. unit/l

**Seminal plasma—****Choriogonadotropin;****substance concentration**

picomole/litre

 $M = 39\,000\text{ g/mol}$ 

Other term(s): hCG

Authority: IUPAC-IUB74; CAS9002-61-3

**[NPU04004]**

SemP—Choriogonadotropin; subst.c. = ? pmol/l

**Seminal plasma—****Citrate;****substance concentration**

millimole/litre

Authority: MSH94D002951

**[NPU01593]**

SemP—Citrate; subst.c. = ? mmol/l

**Cervical mucus—****Consistency;****arbitrary viscosity(procedure)**

Authority: WHO92; ISA92

Note: scale: Watery Mildly viscous Viscous Thick or (0 1 2 3)

**[NPU01525]**

CerMu—Consistency; arb.viscosity(proc.) = ?

**Semen—****Consistency;****arbitrary viscosity(procedure)**

Authority: WHO92; ISA92

Note: scale: Watery Mildly viscous Viscous Thick or (0 1 2 3)

**[NPU03408]**

Sem—Consistency; arb.viscosity(proc.) = ?

**Semen—****Duration after ejaculation;**

time

hour

Authority: WHO92; ISA92

**[NPU03410]**

Sem—Duration after ejaculation; time = ? h

**Patient—****Duration to next expected menstrual period;**

time

day

Authority: WHO92; ISA92

**[NPU01528]**

Pt—Duration to next expected menstrual period; time = ? d

**Cervical mucus—****Ferning;****pattern of crystalization(procedure)**

Authority: WHO92; ISA92

Note: scale: No crystallization Atypical Primary/secondary Tertiary/quaternary or (0 1 2 3)

**[NPU01526]**

CerMu—Ferning; pattern of crystalization(proc.) = ?

Seminal plasma—

Fructose;

substance concentration

millimole/litre

$M = 180,16 \text{ g/mol}$

Other term(s): D-Fructose; D-Levulose

Authority: WHO92; CAS57-48-7

[NPU02097]

SemP—Fructose; subst.c. = ? mmol/l

Seminal plasma—

alpha-

Glucosidase;

catalytic-activity concentration(37 °C; procedure)

microkatal/litre

Other term(s): Glucoinvertase; Glucosidosucrase; Maltase; Maltase-glucoamylase

Authority: EC3.2.1.20

[NPU02215]

SemP—alpha-Glucosidase; cat.c.(37 °C; proc.) = ?  $\mu\text{kat/l}$

Seminal plasma—

gamma-

Glutamyltransferase;

catalytic-activity concentration(37 °C; procedure)

microkatal/litre

Other term(s): Glutamyl transpeptidase

Authority: WHO92; EC2.3.2.2

[NPU08719]

SemP—gamma-Glutamyltransferase; cat.c.(37 °C; proc.) = ?  $\mu\text{kat/l}$

Seminal plasma—

Glycerophosphocholine;

substance concentration

mole/litre

Authority: WHO92

[NPU08720]

SemP—Glycerophosphocholine; subst.c. = ? mol/l

Spermatozoa—

Head(abnormal);

number fraction

[NPU08721]

Sperm.—Head(abnormal); num.fr. = ?

Spermatozoa—

Head(amorphous);

number fraction

[NPU08722]

Sperm.—Head(amorphous); num.fr. = ?

Spermatozoa—

Head(duplicate);

number fraction

[NPU08579]

Sperm.—Head(duplicate); num.fr. = ?

Spermatozoa—

Head(large oval);

number fraction

[NPU08575]

Sperm.—Head(large oval); num.fr. = ?

- Spermatozoa—**  
Head(normal);  
number fraction  
[NPU08932]  
Sperm.—Head(normal); num.fr. = ?
- Spermatozoa—**  
Head(pin);  
number fraction  
[NPU08581]  
Sperm.—Head(pin); num.fr. = ?
- Spermatozoa—**  
Head(pyriiform);  
number fraction  
[NPU08578]  
Sperm.—Head(pyriiform); num.fr. = ?
- Spermatozoa—**  
Head(round);  
number fraction  
[NPU08580]  
Sperm.—Head(round); num.fr. = ?
- Spermatozoa—**  
Head(small oval);  
number fraction  
[NPU08576]  
Sperm.—Head(small oval); num.fr. = ?
- Spermatozoa—**  
Head(tapering);  
number fraction  
[NPU08577]  
Sperm.—Head(tapering); num.fr. = ?
- Spermatozoa—**  
Head(vacuolated);  
number fraction  
[NPU08723]  
Sperm.—Head(vacuolated); num.fr. = ?
- Cervical mucus—**  
Hydrogen ion;  
pH  
Authority: WHO92  
[NPU02411]  
CerMu—Hydrogen ion; pH = ?
- Seminal plasma—**  
Hydrogen ion;  
pH  
Authority: WHO92  
[NPU02414]  
SemP—Hydrogen ion; pH = ?
- Semen—**  
Immature germ cells;  
number concentration  
10<sup>9</sup>/litre  
Authority: WHO92; ISA92  
[NPU08747]

Sem—Immature germ cells; num.c. = ? × 10<sup>9</sup>/l

**Semen—**  
**Leukocytes;**  
 number concentration  
 10<sup>9</sup>/litre  
 Authority: MSH94D007962  
 [NPU02595]  
 Sem—Leukocytes; num.c. = ? × 10<sup>9</sup>/l

**Semen—**  
**Liquefaction;**  
 time(procedure)  
 minute  
 Authority: WHO92; ISA92  
 [NPU03409]  
 Sem—Liquefaction; time(proc.) = ? min

**Spermatozoa—**  
**Midpiece(abnormal);**  
 number fraction  
 [NPU08583]  
 Sperm.—Midpiece(abnormal); num.fr. = ?

**Patient—**  
**Pregnancy;**  
 gestation period  
 [NPU10156]  
 Pt—Pregnancy; gestation period = ?

**Seminal plasma—**  
**6-keto-**  
**Prostaglandin F1-alpha;**  
 substance concentration  
 mole/litre  
 M = 370,5 g/mol  
 Authority: CAS58962-34-8  
 [NPU03274]  
 SemP—6-keto-Prostaglandin F1-alpha; subst.c. = ? mol/l

**Seminal plasma—**  
**Protein;**  
 mass concentration  
 gram/litre  
 [NPU03279]  
 SemP—Protein; mass c. = ? g/l

**Semen—**  
**Round cells;**  
 number concentration  
 10<sup>9</sup>/litre  
 [NPU08718]  
 Sem—Round cells; num.c. = ? × 10<sup>9</sup>/l

**Patient—**  
**Semen;**  
 clarity(procedure)  
 Authority: WHO92; ISA92  
 Note: Example of nominal scale: Clear Opalescent Milky  
 [NPU03407]  
 Pt—Semen; clarity(proc.) = ?

**Patient—****Semen;****colour(procedure)**

Note: Example of scale: white, grey, brown

[NPU03992]

Pt—Semen; colour(proc.) = ?

**Patient—****Semen;****volume****millilitre**

Authority: WHO92; ISA92

[NPU03412]

Pt—Semen; vol. = ? ml

**Patient—****Sexual abstinence;****time****day**

Authority: WHO92; ISA92

[NPU03411]

Pt—Sexual abstinence; time = ? d

**Semen—****Spermatic cell type;****number concentration(list; procedure)**

Authority: WHO92; ISA92

[NPU03448]

Sem—Spermatic cell type; num.c.(list; proc.)

[NPU03443] Sem—Spermatids(sab); num.c. = ? × 10<sup>9</sup>/l[NPU03444] Sem—Spermatids(scb); num.c. = ? × 10<sup>9</sup>/l[NPU03455] Sem—Spermatozoa; num.c. = ? × 10<sup>9</sup>/l[NPU03449] Sem—Spermatocytes(primary); num.c. = ? × 10<sup>9</sup>/l[NPU03450] Sem—Spermatocytes(secondary); num.c. = ? × 10<sup>9</sup>/l[NPU03451] Sem—Spermatogonia; num.c. = ? × 10<sup>9</sup>/l[NPU08747] Sem—Immature germ cells; num.c. = ? × 10<sup>9</sup>/l**Semen—****Spermatids(sab);****number concentration****10<sup>9</sup>/litre**

Other term(s): Spermatoblasts

Authority: WHO92; ISA92

[NPU03443]

Sem—Spermatids(sab); num.c. = ? × 10<sup>9</sup>/l**Semen—****Spermatids(scb);****number concentration****10<sup>9</sup>/litre**

Other term(s): Spermatoblasts

Authority: WHO92; ISA92

[NPU03444]

Sem—Spermatids(scb); num.c. = ? × 10<sup>9</sup>/l**Semen—****Spermatocytes(primary);****number concentration****10<sup>9</sup>/litre**

Authority: WHO92; ISA92

[NPU03449]

Sem—Spermatocytes(primary); num.c. = ? × 10<sup>9</sup>/l

**Semen—****Spermatocytes(secondary);**

number concentration

10<sup>9</sup>/litre

Authority: WHO92; ISA92

[NPU03450]

Sem—Spermatocytes(secondary); num.c. = ? × 10<sup>9</sup>/l**Semen—****Spermatogonia;**

number concentration

10<sup>9</sup>/litre

Authority: WHO92; ISA92

[NPU03451]

Sem—Spermatogonia; num.c. = ? × 10<sup>9</sup>/l**Spermatozoa—****Spermatozoa morphology;**

number fraction(list; procedure)

Authority: WHO92; ISA92

[NPU03456]

Sperm.—Spermatozoa morphology; num.fr.(list; proc.)

[NPU08574] Sperm.—Spermatozoa(normal); num.fr. = ?

[NPU08584] Sperm.—Spermatozoa(cytoplasmic droplet); num.fr. = ?

[NPU08721] Sperm.—Head(abnormal); num.fr. = ?

[NPU08583] Sperm.—Midpiece(abnormal); num.fr. = ?

[NPU08586] Sperm.—Tail(abnormal); num.fr. = ?

**Spermatozoa—****Spermatozoa motility;**

number fraction(list; procedure)

Authority: WHO92; ISA92

[NPU03462]

Sperm.—Spermatozoa motility; num.fr.(list; proc.)

[NPU03459] Sperm.—Spermatozoa(live); num.fr.(proc.) = ?

[NPU08726] Sperm.—Spermatozoa(rapid); num.fr.(proc.) = ?

[NPU08727] Sperm.—Spermatozoa(slow); num.fr.(proc.) = ?

[NPU08728] Sperm.—Spermatozoa(non-progressing); num.fr.(proc.) = ?

[NPU08729] Sperm.—Spermatozoa(immotile); num.fr.(proc.) = ?

**Semen—****Spermatozoa rotation;**

frequency

one/second

[NPU03453]

Sem—Spermatozoa rotation; frequency = ? × 1/s

**Spermatozoa—****Spermatozoa(agglutinated);**

number fraction(procedure)

Authority: WHO92; ISA92

[NPU03457]

Sperm.—Spermatozoa(aggl.); num.fr.(proc.) = ?

**Spermatozoa—****Spermatozoa(cytoplasmic droplet);**

number fraction

[NPU08584]

Sperm.—Spermatozoa(cytoplasmic droplet); num.fr. = ?

**Spermatozoa—**

**Spermatozoa**(immotile);  
number fraction(procedure)  
[NPU08729]  
Sperm.—Spermatozoa(immotile); num.fr.(proc.) = ?

**Spermatozoa—**

**Spermatozoa**(live);  
number fraction(procedure)  
Authority: WHO92; ISA92  
[NPU03459]  
Sperm.—Spermatozoa(live); num.fr.(proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgA);  
number fraction(IBT; procedure)  
Other term(s): Immunobead test; IBT  
Authority: WHO92; ISA92  
[NPU08748]  
Sperm.—Spermatozoa(motile with IgA); num.fr.(IBT; proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgA);  
number fraction(MAR; procedure)  
Other term(s): eryMAR; Latex MAR; MAR test; Mixed antiglobulin test  
Authority: WHO92; ISA92  
[NPU03460]  
Sperm.—Spermatozoa(motile with IgA); num.fr.(MAR; proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgG);  
number fraction(IBT; procedure)  
Other term(s): Immunobead test; IBT  
Authority: WHO92; ISA92  
[NPU08749]  
Sperm.—Spermatozoa(motile with IgG); num.fr.(IBT; proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgG);  
number fraction(MAR; procedure)  
Other term(s): eryMAR; Latex MAR; MAR test; Mixed antiglobulin test  
Authority: WHO92; ISA92  
[NPU03461]  
Sperm.—Spermatozoa(motile with IgG); num.fr.(MAR; proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgM);  
number fraction(IBT; procedure)  
Other term(s): Immunobead test; IBT  
Authority: WHO92; ISA92  
[NPU08750]  
Sperm.—Spermatozoa(motile with IgM); num.fr.(IBT; proc.) = ?

**Spermatozoa—**

**Spermatozoa**(motile with IgM);  
number fraction(MAR; procedure)  
Other term(s): eryMAR; Latex MAR; MAR test; Mixed antiglobulin test  
Authority: WHO92; ISA92  
[NPU08725]  
Sperm.—Spermatozoa(motile with IgM); num.fr.(MAR; proc.) = ?

**Spermatozoa—****Spermatozoa(non-progressing);**

number fraction(procedure)

[NPU08728]

Sperm.—Spermatozoa(non-progressing); num.fr.(proc.) = ?

**Spermatozoa—****Spermatozoa(normal);**

number fraction

[NPU08574]

Sperm.—Spermatozoa(normal); num.fr. = ?

**Spermatozoa—****Spermatozoa(rapid);**

number fraction(procedure)

[NPU08726]

Sperm.—Spermatozoa(rapid); num.fr.(proc.) = ?

**Spermatozoa—****Spermatozoa(slow);**

number fraction(procedure)

[NPU08727]

Sperm.—Spermatozoa(slow); num.fr.(proc.) = ?

**Semen—****Spermatozoa;**

number of entities(procedure)

 $10^6$ 

[NPU03454]

Sem—Spermatozoa; num.(proc.) = ?  $\times 10^6$ **Semen—****Spermatozoa;**

number concentration

 $10^9$ /litre

[NPU03455]

Sem—Spermatozoa; num.c. = ?  $\times 10^9$ /l**Cervical mucus—****Spermatozoal antibody;**

arbitrary concentration(procedure)

Other term(s): Sperm-cervical mucus contact test; SCMC test

Authority: WHO92; ISA92

[NPU03445]

CerMu—Spermatozoal antibody; arb.c.(proc.) = ?

**Plasma(Blood)—****Spermatozoal antibody;**

arbitrary concentration(procedure)

[NPU03446]

P(B)—Spermatozoal antibody; arb.c.(proc.) = ?

**Seminal plasma—****Spermatozoal antibody;**

arbitrary concentration(MAR; procedure)

Other term(s): eryMAR; Latex MAR; MAR test; Mixed antiglobulin test

[NPU08962]

SemP—Spermatozoal antibody; arb.c.(MAR; proc.) = ?

**Seminal plasma—****Spermatozoal antibody;**

arbitrary concentration(IBT; procedure)

Other term(s): Immunobead test; Friberg-test; GAT; Gelatine agglutination test; K-B-M; Kibrick test; TAT; Tray

agglutination technique

Authority: WHO92; ISA92

[NPU03447]

SemP—Spermatozoal antibody; arb.c.(IBT; proc.) = ?

**Semen(Patient identification)+Cervical mucus(Patient identification)—  
Spermatozoal penetration;**

**arbitrary property(Kremer; procedure)**

Other term(s): Kremer test

Authority: WHO92; ISA92

Note: scale: Negative Poor Good Excellent or (0 1 2 3)

[NPU08752]

Sem(Pt ID)+CerMu(Pt ID)—Spermatozoal penetration; arb.(Kremer; proc.) = ?

**Semen(Patient identification)+Cervical mucus(Patient identification)—  
Spermatozoal penetration;**

**arbitrary property(post-coital; procedure)**

Other term(s): Cervical mucus-Semen interaction; Slide test; Capillary tube test

Authority: WHO92; ISA92

Note: scale: Negative Poor Good Excellent or (0 1 2 3)

[NPU03458]

Sem(Pt ID)+CerMu(Pt ID)—Spermatozoal penetration; arb.(post-coital; proc.) = ?

**Semen(Patient identification)+Cervical mucus(Patient identification)—  
Spermatozoal penetration;**

**arbitrary property(SCMC; procedure)**

Other term(s): Sperm-cervical mucus contact test; SCMC

Authority: WHO92; ISA92

Note: scale: Negative Poor Good Excellent or (0 1 2 3)

[NPU08751]

Sem(Pt ID)+CerMu(Pt ID)—Spermatozoal penetration; arb.(SCMC; proc.) = ?

**Semen—**

**Spermatozoon;**

**velocity(curvilinear)**

**micrometre/second**

[NPU03997]

Sem—Spermatozoon; vel.(curvilinear) = ?  $\mu\text{m/s}$

**Cervical mucus—**

**Spinnbarkeit;**

**length increment**

**millimetre**

Other term(s): For component: elasticity; fibrosity; threadability

Authority: WHO92; ISA92

Note: scale: <10 mm:0 10-40 mm:1 50-80 mm:2  $\geq$ 90 mm:3

[NPU01527]

CerMu—Spinnbarkeit; length incr. = ? mm

**Spermatozoa—**

**Tail(abnormal);**

**number fraction**

[NPU08586]

Sperm.—Tail(abnormal); num.fr. = ?

**Spermatozoa—**

**Tail(coiled);**

**number fraction**

[NPU08587]

Sperm.—Tail(coiled); num.fr. = ?

**Spermatozoa—**

**Tail(duplicated);**

number fraction

[NPU08588]

Sperm.—Tail(duplicated); num.fr. = ?

**Spermatozoa—****Tail(normal);**

number fraction

[NPU08963]

Sperm.—Tail(normal); num.fr. = ?

**Spermatozoa—****Tail(swelled)**

number fraction

[NPU08724]

Sperm.—Tail(swelled); num.fr. = ?

**Seminal plasma—****Testosterone;**

substance concentration

nanomole/litre

 $M = 288,41 \text{ g/mol}$ 

Authority: IUPAC-IUB89; CAS58-22-0

[NPU03545]

SemP—Testosterone; subst.c. = ? nmol/l

**Seminal plasma—****Zinc;**

substance concentration

micromole/litre

 $A = 65,38$ 

Authority: IUPAC/II/C-TOX; CAS7440-66-6

[NPU03769]

SemP—Zinc; subst.c. = ?  $\mu\text{mol/l}$