

OLYMPIC MOVEMENT  
ANTI-DOPING CODE

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## P R E A M B L E

**WHEREAS** in furtherance of its role, the Olympic Movement, in close collaboration with the International Federations (IFs) and the National Olympic Committees (NOCs) dedicates its efforts to ensuring that in sports the spirit of Fair Play prevails and violence is banned, leads the fight against doping in sport and takes measures, the goal of which is to prevent endangering the health of athletes;

**WHEREAS** the Olympic Movement's duty to protect the health of athletes and ensure respect for sports ethics leads it to prohibit doping and to oblige competitors to undergo medical tests and examinations, prescribing to such end the sanctions applicable in the event of a violation of the established rules;

**WHEREAS** one of the fundamental objectives of the Olympic Movement is to completely eliminate doping from sport, the adoption of the Olympic Movement Anti-Doping Code reflects the solidarity of the entire Olympic Movement in the achievement of such goal, and the primary means to achieve this result will be continuing education regarding the ethical values of sport and the dangers, both physical and moral, of doping, this Code must be effective to deal with doping cases as they arise;

**WHEREAS** the Olympic Movement Anti-Doping Code is essentially intended to ensure respect for the ethical concepts implicit in Fair Play, the Olympic Spirit and medical practice and to safeguard the health of athletes;

**WHEREAS** the Olympic Movement Anti-Doping Code applies to the Olympic Games, the various championships and all competitions to which the International Olympic Committee (IOC) grants its patronage or support and to all sports practised within the context of the Olympic Movement, including during pre-competition preparation periods;

**WHEREAS** in keeping with the desire of the Olympic Movement to act in the best interests of athletes and other persons concerned whose rights to justice must be safeguarded, the Olympic Movement Anti-Doping Code shall include provisions to enable appeals to be lodged with the Court of Arbitration for Sport against certain decisions rendered in application of such Code;

Upon proposal of the IOC Executive Board, the entire Olympic:

## CHAPTER I GENERAL PROVISIONS

Article 1:

### DEFINITIONS

**BLOOD DOPING** means the administration of blood, red blood cells and related blood products to an athlete, which may be preceded by withdrawal of blood from the athlete who continues to train in such a blood-depleted state.

**INTENTIONAL DOPING** means doping in circumstances where it is established, or may reasonably be presumed, that any Participant acted knowingly or in circumstances amounting to gross negligence.

**MASKING AGENT** means any substance or procedure used for the purpose of or having the effect of altering or suppressing the integrity of urine or other samples used in doping controls.

**PARTICIPANT** means any athlete, coach, trainer, official, medical or para-medical personnel working with or treating athletes participating in or preparing for sports competitions of the Olympic Games, those competitions to which the IOC grants its patronage or support and all competitions organized under the authority, whether direct or delegated, of an IF or NOC.

a

**PHARMACEUTICAL, CHEMICAL AND PHYSICAL MANIPULATION** means the use of substances and methods, including masking agents which alter, attempt to alter or may reasonably be expected to alter the integrity and validity of urine samples used in doping controls, including, without limitation, catheterisation, urine substitution and/or tampering, inhibition of renal excretion such as by probenidicid and Related Substances and alterations of testosterone and epitestosterone measurements such as epitestosterone application or bromantan administration.

**PROHIBITED METHOD** means any method so described in this Code.

**PROHIBITED SUBSTANCE** means any substance so described in this Code.

**RELATED SUBSTANCE** means any substance having pharmacological action and/or chemical structure similar to a Prohibited Substance or any other substance referred to in this Code.

**TRAFFICKING** shall be deemed to occur when a person, without having expressly received prior authorization from the competent body,

a) manufactures, extracts, transforms, prepares, stores, expedites, transports, imports, exports, transits, offers subject to payment or free of charge, distributes, sells, exchanges, undertakes the brokerage of, obtains in any form, prescribes, commercializes, makes over, accepts, possesses, holds, buys or acquires in any manner prohibited doping substances;

b) takes any measures to this end, finances such substances or serves as an intermediary for their financing, provokes in any way the consumption or use of such substances, or establishes means of procuring or consuming such substances;

c) is party to Prohibited Methods.

**USE** means the application, ingestion, injection, consumption by any means whatsoever of any Prohibited Substance or Prohibited Method. Use includes counselling the use of, permitting the use of or condoning the use of any Prohibited Substance or Prohibited Method.

#### Article 2:

1. This Code applies to all Participants.
2. All athletes are subject to doping controls (urine analyses, blood tests and other authorized techniques for detecting prohibited substances or methods).  
(Amendment adopted in Rio de Janeiro, 24 May 2000).

#### Article 3:

Notwithstanding the obligations of other Participants to comply with the provisions of this Code, it is the personal responsibility of any athlete subject to the provisions of this Code to ensure that he/she does not use or allow the use of any Prohibited Substance or any Prohibited Method.

#### Article 4:

The list of Prohibited Substances and Prohibited Methods contained in this Code may be changed by the IOC Executive Board upon recommendation by the Council of the International Anti-Doping Agency (IADA) and will come into effect three months, or such shorter delay as shall be specified in cases of medical necessity, after the International Federations and the National Olympic Committees have been notified, in such manner as shall be determined by the IADA.

## CHAPTER II THE OFFENCE OF DOPING AND ITS PUNISHMENT

### Article 1:

1. Doping contravenes the fundamental principles of Olympism and sports and medical ethics.
2. Doping is forbidden.
3. Recommending, proposing, authorizing, condoning or facilitating the use of any substance or method covered by the definition of doping or trafficking therein is also forbidden.

### Article 2:

#### Doping is:

1. the use of an expedient (substance or method) which is potentially harmful to athletes' health and/or capable of enhancing their performance, or
2. the presence in the athlete's body of a Prohibited Substance or evidence of the use thereof or evidence of the use of a Prohibited Method.

### Article 3:

1. In a case of doping, the penalties for a first offence are as follows:

a) if the Prohibited Substance used is ephedrine, phenylpropanolamine, pseudoephedrine, caffeine, strychnine or related substances:

- I) a warning;
- II) a ban on participation in one or several sports competitions in any capacity whatsoever;
- III) a fine of up to US\$ 100,000;
- IV) suspension from any competition for a period of one to six months.

b) if the Prohibited Substance used is one other than those referred to in paragraph a) above:

- I) a ban on participation in one or several sports competitions in any capacity whatsoever;
- II) a fine of up to US\$ 100,000;

III) suspension from any competition for a minimum period of two years. However, based on specific, exceptional circumstances to be evaluated in the first instance by the competent IF bodies, there may be a provision for a possible modification of the two-year sanction.

## 2. In case of

- a) intentional doping;
- b) the use of a Masking Agent;
- c) manoeuvres or manipulation that may prevent or distort any test contemplated in this Code;
- d) refusal to undergo any test contemplated in this Code;
- e) doping for which responsibility is imputable to an official or the athlete's entourage
- f) complicity or other forms of involvement in an act of doping by members of a medical, pharmaceutical or related profession.

The sanctions are as follows:

a) if the Prohibited Substance used is ephedrine, phenylpropanolamine, pseudoephedrine, caffeine or strychnine and related substances:

- I) a ban on participation in one or several sports competitions in any capacity whatsoever;
- II) a fine of up to US\$ 100,000;
- III) suspension from any competition for a period of two to eight years.

b) if the Prohibited Substance used is one other than those referred to in paragraph a) above or if it is a repeat offence (a repeat offence being constituted by a further case of doping perpetrated within a period of ten years after the preceding sanction, whatever form it took and whatever the reason for it, became final):

- I) a life ban on participation in any sports event in any capacity whatsoever.
- II) a fine of up to US\$ 1,000,000
- III) suspension (between four years and life) from all sports competition.

3. Any case of doping during a competition automatically leads to invalidation of the result obtained (with all its consequences, including forfeit of any medals and prizes), irrespective of any other sanction that may be applied, subject to the provisions of point 4 of this article.

4. In the event that a competitor who is a member of a team is found guilty of doping, the relevant rules of the International Federation concerned shall be applied.

5. The penalty for an offence committed by a competitor and detected on the occasion of an out-of-competition test shall be the same, mutatis mutandis, and shall take effect from the date the positive result was recorded or the date on which the final judgement further to an appeal is pronounced, whichever is the more recent.

6. The penalties for trafficking in Prohibited Substances are as follows:

a) In the event of trafficking in Prohibited Substances the penalty will be suspension for life from participation in any sports organization, body, activity or event in any capacity whatsoever.

In addition, the offence(s) may be reported to the competent administrative and judicial authorities by any interested physical or legal person.

Any attempt to perform trafficking shall be penalized in the same manner as the act itself.

b) For persons found guilty of trafficking, ignorance of the nature or composition of the Prohibited Substances or the nature or effects of the methods in question does not constitute attenuating circumstances or grounds for exemption from punishment.

7. The penalties set out in this Code may be applied concurrently insofar as they are compatible and may be accompanied with measures prescribing regular or unannounced tests of the athlete concerned over a specified period of time.

Article 4:

1. Intentional doping can be proved by any means whatsoever, including presumption.

2. Evidence obtained from metabolic profiles and/or isotopic ratio measurements may be used to draw definitive conclusions regarding the use of anabolic androgenic steroids.

3. An epitestosterone concentration in the urine greater than 200 nanograms per millilitre will be investigated by studies as in Article (I.C .I b) of Appendix B for testosterone.

4. The success or failure of the use of a Prohibited Substance or Prohibited Method is not material. It is sufficient that the Prohibited Substance or Prohibited Method was used or attempted for the offence of doping to be considered as consummated.



## CHAPTER III APPEALS

### Article 1:

Any Participant affected by a decision rendered in application of this Code by the IOC, an IF, an NOC or other body may appeal from that decision to the Court of Arbitration for Sport, in accordance with the provisions applicable before such court.

### Article 2:

Accredited laboratories are presumed to have conducted testing and custodial procedures in accordance with prevailing and acceptable standards of scientific practice. This presumption can be rebutted by convincing evidence to the contrary, but the accredited laboratory shall have no onus in the first instance to show that it conducted the procedures other than in accordance with its customary practices.

### Article 3:

The inclusion of a Prohibited Substance or Prohibited Method in this Code is not subject to appeal.

### Article 4:

Parties appealing from decisions are expected, as is the Court of Arbitration for Sport, to proceed with all due despatch, in the understanding that there must be early certainty with respect to all decisions involving sport. The Court of Arbitration for Sport is entitled to draw inferences from dilatory behaviour on the part of any party appearing before it.

### Article 5:

The Court of Arbitration for Sport may award costs against a party whose appeal is judged to be vexatious, frivolous, dilatory or otherwise abusive.

### Article 6:

Participants shall accept the individual or joint obligation to submit disputes concerning the application of this Code to the Court of Arbitration for Sport. Such acceptance is presumed by the very fact of participation by the Participants in the Olympic Movement. Any de facto refusal of such acceptance shall result in the Participants being considered as having excluded themselves from the Olympic Movement.

## CHAPTER IV INTERNATIONAL ANTI-DOPING AGENCY

### Article 1:

The International Anti-Doping Agency shall have the mission, structure and responsibilities set forth in the documents establishing its existence.

## CHAPTER V ACCREDITED LABORATORIES

### Article 1:

For purposes of this Code, only those laboratories accredited by the IADA are qualified to undertake the detection of the presence of Prohibited Substances and the use of Prohibited Methods.

### Article 2:

Any laboratory alleging accreditation by the IADA shall be required, upon demand, to produce a certificate valid as of the date of the relevant test, procedure or analysis. The IADA may also provide evidence as to the existence of such accreditation.

### Article 3:

The procedure for accreditation of laboratories is provided in Appendix “B” to this Code.

### Article 4:

(1) IOC accredited laboratories are required to summarize, on a quarterly basis, their testing activities and statistics.

(2) Reports of samples having been found to contain prohibited substances and/or excessive amounts of endogenous substances, shall be sent simultaneously to:

- (a) the responsible authorities of the organization having initiated the control
- (b) the IOC Medical Commission, Lausanne
- (c) the IF concerned if not the same as the authority under paragraph (a)

The report shall contain the following items:

- (a) F, responsible authority
- (b) Date and place of sampling
- (c) Prohibited substance(s) identified
- (d) Code number
- (e) In or out-of-competition
- (f) Name of IF event

All organizations and Participants which use IOC accredited laboratories are deemed to agree to provide the information listed in this Article.

## CHAPTER VI TESTING PROCEDURES

### Article 1:

The procedures for selection of athletes (other than for out-of-competition tests), collection of samples and sample analysis are contained in Appendix “B” to this Code.

### Article 2:

Laboratory analysis procedures are contained in Appendix “D” to this Code.

### Article 3:

A result is positive when the “A” sample is positive and any such result may be acted upon for purposes of any competition or out-of-competition test. A Participant may, however, request that the “B” sample be analysed. Should the analysis show the “B” sample to be negative:

(a) no further sanctions shall apply, but the initial sanction (disqualification) shall nevertheless remain in full force and effect, however

(b) if, without otherwise affecting the competition, it is still possible for the Participant to be reinserted, the Participant may continue to take part in the competition. (For example, if an athlete is entered in more than one event and the second has not commenced, it may be possible to enter the second event. Similarly, depending upon the relevant rules of the IF in a team sport, if the team is still in competition, the Participant may be able to take part in future games.)

### Article 4:

The IOC Executive Board is the only organ competent to rule on the effects of a positive result during the Olympic Games. It shall request the advice of the IOC Medical Commission prior to acting on any positive result.

In all other competitions organized by or under the authority of an IF, the competent organ of such IF shall be solely responsible for the application of this Code in relation to such competitions as well as in relation to all tests which have been conducted out-of-competition.

In competitions organized under the authority of Continental Associations of NOCs, the Executive Committees of such associations shall be the competent bodies to rule on the effects of a positive result during such competitions.

Each body concerned shall advise the IOC Medical Director of all positive results and the dispositions made in respect thereof and provide such data in respect of all tests, whether positive results or otherwise, as may be requested by the IOC Medical Director.

Article 5:

Minor irregularities, which cannot reasonably be considered to have affected the results of otherwise valid tests, shall have no effect on such results. Minor irregularities do not include the chain of custody of the sample, improper sealing of the container(s) in which the sample is stored, failure to request the signature of the athlete or failure to provide the athlete with an opportunity to be present or be represented at the opening and analysis of the "B" sample if analysis of the "B" sample is requested.

CHAPTER VII            ENTRY INTO FORCE AND MODIFICATION OF THE OLYMPIC  
MOVEMENT ANTI-DOPING CODE

Article 1:

This Code shall enter into force on 1st January 2000.

Article 2:

This Code may be modified only by the IOC Executive Board, upon recommendation of the Council of the International Independent Anti-Doping Agency after consultation of the parties concerned. Modifications come into effect three months after the International Federations and the National Olympic Committees have been notified in such manner as shall be determined by the IOC Executive Board.

## ANNEXES

### APPENDIX A PROHIBITED CLASSES OF SUBSTANCES AND PROHIBITED METHODS

#### I. PROHIBITED CLASSES OF SUBSTANCES

##### A. STIMULANTS

**Prohibited Substances in class (A) include the following examples: amineptine, amiphenazole, amphetamines, bromantan, caffeine, carphedon, cocaine, ephedrines\*\*, fencamfamin, mesocarb, pentetrazol, pipradrol, salbutamol\*\*\*, salmeterol\*\*\*, terbutaline\*\*\*, ... and related substances**

\* For caffeine the definition of a positive is a concentration in urine greater than 12 micrograms per millilitre.

\*\* For ephedrine, cathine and methylephedrine, the definition of a positive is a concentration in urine greater than 5 micrograms per millilitre. For phenylpropanolamine and pseudoephedrine, the definition of a positive is a concentration in urine greater than 10 micrograms per millilitre. If more than one of these substances are present below their respective thresholds, the concentrations should be added. If the sum is greater than 10 micrograms per millilitre, the sample shall be considered positive.

\*\*\* Permitted by inhaler only to prevent and/or treat asthma and exercise-induced asthma. Written notification prior to the particular competition of asthma and/or exercise-induced asthma by a respiratory or team physician is necessary to the relevant medical authority.

NOTE: All imidazole preparations are acceptable for topical use, e.g. oxymetazoline. Vasoconstrictors (e.g. adrenaline) may be administered with local anaesthetic agents. Topical preparations (e.g. nasal, ophthalmological) of phenylephrine are permitted.

##### B. NARCOTICS

Prohibited Substances in class (B) include the following examples:

**buprenorphine, dextromoramide, diamorphine (heroin), methadone, morphine, pentazocine, pethidine, ... and related substances**

NOTE: codeine, dextromethorphan, dextropropoxyphene, dihydrocodeine, diphenoxylate, ethylmorphine, pholcodine, propoxyphene and tramadol are permitted.

##### C. ANABOLIC AGENTS

Prohibited Substances in class (C) include the following examples:

## **1. Anabolic androgenic steroids**

**a/**

**clostebol, fluoxymesterone, metandienone, metenolone, nandrolone,  
19-norandrostenediol, 19-norandrostenedione, oxandrolone, stanozolol,  
... and related substances**

**b/**

**androstenediol, androstenedione, dehydroepiandrosterone (DHEA), dihydrotestosterone,  
testosterone\*,  
... and related substances**

\* The presence of a testosterone (T) to epitestosterone (E) ratio greater than six (6) to one (1) in the urine of a competitor constitutes an offence unless there is evidence that this ratio is due to a physiological or pathological condition, e.g. low epitestosterone excretion, androgen producing tumour, enzyme deficiencies.

In the case of T/E greater than 6, it is mandatory that the relevant medical authority conducts an investigation before the sample is declared positive. A full report will be written and will include a review of previous tests, subsequent tests and any results of endocrine investigations. In the event that previous tests are not available, the athlete should be tested unannounced at least once per month for three months. The results of these investigations should be included in the report. Failure to co-operate in the investigations will result in declaring the sample positive.

## **2. Beta-2 agonists**

When administered orally or by injection.

**bambuterol, clenbuterol, fenoterol, formoterol, reproterol, salbutamol\*, terbutaline\*,  
... and related substances**

\*authorized by inhalation as described in Article (I.A.).

## **D. DIURETICS**



Prohibited substances in class (D) include the following examples:

**acetazolamide, bumetanide, chlorthalidone, etacrynic acid, furosemide, hydrochlorothiazide, mannitol\*, mersalyl, spironolactone, triamterene, ... and related substances**

\* Prohibited by intravenous injection.

#### **E. PEPTIDE HORMONES, MIMETICS AND ANALOGUES**

Prohibited Substances in class (E) include the following examples and their analogues and mimetics:

- 1. Chorionic Gonadotrophin (hCG);**
- 2. Pituitary and synthetic gonadotrophins (LH);**
- 3. Corticotrophins (ACTH, tetracosactide);**
- 4. Growth hormone (hGH);**
- 5. Insulin-like Growth Factor (IGF-1);**

and all the respective releasing factors and their analogues;

- 6. Erythropoietin (EPO);**
- 7. Insulin**

permitted only to treat insulin-dependent diabetes. Written notification prior to the particular competition of insulin-dependent diabetes by an endocrinologist or team physician to the Relevant Medical Authority is necessary.

The presence of an abnormal concentration of an endogenous hormone or its diagnostic marker(s) in the urine of a competitor constitutes doping unless it has been conclusively documented to be solely due to a physiological or pathological condition.

## II. PROHIBITED METHODS

The following procedures are prohibited:

1. Blood doping
2. Pharmacological, chemical and physical manipulation

### III. CLASSES OF PROHIBITED SUBSTANCES IN CERTAIN CIRCUMSTANCES

#### A. ALCOHOL

Where the rules of a responsible authority so provide, tests will be conducted for ethanol.

#### B. CANNABINOIDS

Where the rules of a responsible authority so provide, tests will be conducted for cannabinoids (e.g. Marijuana, Hashish). At the Olympic Games, tests will be conducted for cannabinoids. A concentration in urine of 11-nor-delta 9-tetrahydrocannabinol-9-carboxylic acid (carboxy-THC) greater than 15 nanograms per millilitre constitutes doping.

#### C. LOCAL ANAESTHETICS

Injectable local anaesthetics are permitted under the following conditions:

- a) bupivacaine, lidocaine, mepivacaine, procaine, etc. can be used but not cocaine. Vasoconstrictor agents (e.g. adrenaline) may be used in conjunction with local anaesthetics.
- b) only local or intra-articular injections may be administered;
- c) only when medically justified, upon written notice prior to the particular competition to the Relevant Medical Authority, when applicable, or during the competition in matters of medical urgency.

#### D. CORTICOSTEROIDS

The systemic use of corticosteroids is prohibited.

Anal, aural, dermatological, inhalational, nasal and ophthalmological (but not rectal) administration is permitted. Intra-articular and local injections of corticosteroids are permitted. Where the rules of a responsible authority so provide, notification of administration may be necessary.

#### E. BETA-BLOCKERS

Some examples of Beta-blockers are:

**acebutolol, alprenolol, atenolol, labetalol, metoprolol, nadolol, oxprenolol, propranolol, sotalol, ... and related substances**

Where the rules of a responsible authority so provide, tests will be conducted for beta-blockers.

**SUMMARY OF URINARY CONCENTRATIONS ABOVE WHICH ACCREDITED LABORATORIES MUST REPORT FINDINGS FOR SPECIFIC SUBSTANCES**

caffeine	> 12 micrograms / millilitre
carboxy-THC	> 15 nanograms / millilitre
cathine	> 5 micrograms / millilitre
ephedrine	> 5 micrograms / millilitre
epitestosterone	> 200 nanograms / millilitre
methylephedrine	> 5 micrograms / millilitre
morphine	> 1 microgram / millilitre
phenylpropanolamine	> 10 micrograms / millilitre
pseudoephedrine	> 10 micrograms / millilitre
T/E ratio	> 6

#### IV. LIST OF EXAMPLES OF PROHIBITED SUBSTANCES

##### **CAUTION:**

This is not an exhaustive list of Prohibited Substances. Many substances that do not appear on this list are prohibited under the term “and related substances”.

##### **STIMULANTS:**

amineptine, amfepramone, amiphenazole, amphetamine, bambuterol, bromantan, caffeine, carphedon, cathine, cocaine, cropropamide, crotethamide, ephedrine, etamivan, etilamphetamine, etilefrine, fencamfamin, fenetylline, fenfluramine, formoterol, heptaminol, mefenorex, mephentermine, mesocarb, methamphetamine, methoxyphenamine, methylenedioxyamphetamine, methylephedrine, methylphenidate, nikethamide, norfenfluramine, parahydroxyamphetamine, pemoline, pentetrazol, phendimetrazine, phentermine, phenylephrine, phenylpropanolamine, pholedrine, pipradrol, prolintane, propylhexedrine, pseudoephedrine, reproterol, salbutamol, salmeterol, selegiline, strychnine, terbutaline,

##### **NARCOTICS:**

buprenorphine, dextromoramide, diamorphine (heroin), hydrocodone, methadone, morphine, pentazocine, pethidine,

##### **ANABOLIC AGENTS:**

androstenediol, androstenedione, bambuterol, boldenone, clenbuterol, clostebol, danazol, dehydrochlormethyltestosterone, dehydroepiandrosterone (DHEA), dihydrotestosterone, drostanolone, fenoterol, fluoxymesterone, formebolone, formoterol, gestrinone, mesterolone, metandienone, metenolone, methandriol, methyltestosterone, mibolerone, nandrolone, 19-norandrostenediol, 19-norandrostenedione, norethandrolone, oxandrolone, oxymesterone, oxymetholone, reproterol, salbutamol, salmeterol, stanozolol, terbutaline, testosterone, trenbolone,

##### **DIURETICS:**

acetazolamide, bendroflumethiazide, bumetanide, canrenone, chlortalidone, ethacrynic acid, furosemide, hydrochlorothiazide, indapamide, mannitol, mersalyl, spironolactone, triamterene,

##### **MASKING AGENTS:**

bromantan, diuretics (see above), epitestosterone, probenecid,

##### **PEPTIDE HORMONES, MIMETICS AND ANALOGUES:**

ACTH, erythropoietin (EPO), hCG, hGH, insulin, LH,

##### **BETA BLOCKERS:**

**acebutolol, alprenolol, atenolol, betaxolol, bisoprolol, bunolol, labetalol, metoprolol, nadolol, oxprenolol, propranolol, sotalol.**

## APPENDIX B

### PROCEDURE FOR ACCREDITATION OF LABORATORIES

Accreditation of a laboratory is granted by the IOC Executive Board, upon the recommendation of the IADA. Such accreditation is evidenced by a certificate to such effect signed by the duly authorized representative of the IADA. Such certificate shall specify the name of the laboratory and the period for which the certificate shall be valid. Certificates may be issued after the effective date, with retroactive effect.

#### 1. LETTERS OF SUPPORT

Laboratories seeking accreditation are requested to provide a letter of support from a National Authority, such as the NOC, sports governing body or other and any other letters of support that they might wish the IOC Medical Commission to consider. The final decision regarding the acceptance of the letters of support will be made by the IOC Medical Commission, taking into account such factors as continuity, volume of workload, long term financial support, administrative commitment of the host institution, and research activities and accomplishments, such as publication records of senior staff.

#### 2. INITIAL REQUIREMENTS

Analytical laboratories which request IOC accreditation must fulfil the following requirements and answer any other question posed by the IOC Medical Director.

2.1 Provide a list of staff and their qualifications.

2.2 Provide a list of Standard Operating Protocols.

2.3 Provide a list of instrumental resources and equipment. Laboratories seeking IOC accreditation should be aware that definite identification of a Prohibited Substance requires analysis by mass spectrometry except for peptide hormones and glycoproteins.

2.4 Provide a list of substances which the laboratory is able to detect and identify. The minimum repertoire will be the list of examples enumerated in this Code under the different classes of Prohibited Substances (and their metabolites).

2.5 Provide a list of available reference substances (dope agents and metabolites).

2.6 Provide a list of the excretion studies (dose, etc.) that have been performed on human volunteers. State the minimum concentration which can be detected (based on an excretion study with a reasonable number of serial collections).

### 3. ELIGIBILITY

A laboratory will be considered to be eligible for reaching IOC accreditation when a positive evaluation of letters of support and additional initial requirements is completed by the IOC Medical Commission.

### 4. PRE-ACCREDITATION PROCEDURES

4.1. Prior to the official accreditation tests, laboratories seeking accreditation will be requested to analyse three sets of samples successfully over a period which can vary from six to twelve months. The corresponding documentation (full report and raw data) of the results shall be sent to the IOC Medical Director.

4.2. Commencing 1st January [2000], holding accreditation according to the ISO Guide 25 will be an additional pre-accreditation requirement.

### 5. ACCREDITATION PROCEDURES

5.1 The laboratory seeking accreditation will be required to analyse ten control samples in the presence of a delegate of the IOC Medical Commission.

The control samples will contain substances which are examples of the list of classes of prohibited substances. Blank urines may be included as well as samples containing more than one (but not more than three) doping agents.

5.2 Prior to visiting the laboratory, the delegate will be provided with all the documentation on the samples to be used in the accreditation of the laboratory concerned. After the inspection visit, the delegate will present a formal written report to the IOC Medical Commission.

5.3 The laboratory must correctly identify the doping agents and their respective metabolites within three days (set by the IOC Medical Commission) from the beginning of the analysis (i.e. from when the seals are broken).

5.4 The laboratory shall provide a report of the results, copies of which shall be sent by Express Courier to the Chairman of the IOC Medical Commission and three copies to the IOC Medical Director and one copy to each of the members of the Subcommittee Doping and Biochemistry of Sport within three weeks after completing the accreditation test.

The report shall include:



5.4.1 Protocols: complete description of the analytical procedures, with appropriate references.

5.4.2 Copies of the screening and confirmation data used in generating the results and the criterion for identification.

5.4.3 Signed agreements to comply with the IOC Rules of Ethics (Annex II).

5.5 After considering the data as well as other factors, the IOC Medical Commission will announce its decision through the Chairman of the IOC Medical Commission.

## 6. REACCREDITATION PROCEDURES INCLUDING ANNUAL PROFICIENCY TESTING

6.1 The date of the annual reaccreditation shall be published at least three months prior to the test. The test will be based on the list of Prohibited Substances. Further details, including the latest edition of the IOC Rules of Ethics, will be given not later than two weeks prior to the test.

6.2 The request to analyse control samples and report their results to the Chairman of the IOC Medical Commission.

6.3 To provide a fully documented report, as described for 5.4.1 and 5.4.2 above. After all reports have been received, the chairman shall distribute a list disclosing the content of the sampler.

6.4 To answer any other question raised by the IOC Medical Commission, designed to obtain information pertaining to the present status of the laboratory, personnel, instrumentation, space and other matters.

6.5 To sign the agreement to continue complying with the IOC Rules of Ethics.

6.6 From 1st January [2000], to maintain ISO guide 25 accreditation.

6.7 The Subcommittee Doping and Biochemistry of Sport shall review these reports and provide a written summary and recommendations to the Chairman of the IOC Medical Commission. In the event that the recommendation is not favourable, the reasons shall be explicitly stated.

6.8 Decisions on reaccreditation will be made on the basis of these and other considerations.

## 7. EDUCATIONAL TRAINING PROGRAMME

7.1 The IOC Medical Commission is vitally interested in upgrading existing methods and developing new methods and strategies for detecting Prohibited Substances. To further this end, the Subcommittee Doping and Biochemistry of Sport will distribute urine samples designated to assist in this effort. Accredited

laboratories are expected to participate in the exercise. The Subcommittee will distribute a summary of the finding.

7.2 Periodically the Subcommittee Doping and Biochemistry of Sport will ask laboratories to provide documentation of analytical performance on a specific batch of samples, or positive samples, or both. The laboratories are expected to comply on a timely basis. The Subcommittee will evaluate the data and provide a written report.

## 8. REVIEW MECHANISMS

The IOC Medical Commission reserves the right to inspect an accredited laboratory. The announcement of such an inspection will be made in writing by the IOC Medical Director to the director of the laboratory concerned.

## 9. SPECIAL REQUIREMENTS FOR MAJOR EVENTS

Laboratories seeking accreditation for forthcoming Olympic Games must first pass the accreditation 12 months before the event. Second, as part of the accreditation process, four months before the actual event, the laboratory must provide the following information (in writing) to the IOC Medical Commission of the progress made in preparing the laboratory for the Olympic Games to demonstrate its capability to handle the expected sample load.

9.1 Identification of external scientists (if required)

9.2 List of the staff (with qualifications) who will be working in the laboratory

9.3 Provide a list of instrumental resources and equipment

9.4 Protocol of analytical methods (procedure manual)

9.5 A summary of the decision-making process to determine positive and negative results.

Based on this information, the IOC Medical Commission will decide whether it will grant a special accreditation for the time period of the particular Games for the higher expected workload. For other major events, the IOC Medical Commission is prepared to provide consulting advice.

## 10. RULES OF ETHICS

In order to reach and maintain the status of IOC accredited laboratory, its director must agree in writing annually, as part of the reaccreditation procedures, to comply with all the dispositions of the IOC Medical Commission Rules of Ethics for accredited laboratories. The Rules of Ethics is reproduced in Annex II to this Appendix.

## 11. SPECIMEN COMPOSITION FOR ACCREDITATION AND PROFICIENCY TESTING

Samples appropriate for proficiency testing, accreditation and reaccreditation purposes will be obtained after administration of one or more doping agents. In addition, nicotine and caffeine may be present in low concentrations. After ingestion of a pharmaceutical dose, the urines will be collected and the cumulative urines combined in such a way that specific minimum concentrations will be achieved: In the context of the annual reaccreditation examination, IOC accredited laboratories are expected to be able to detect certain concentrations of Prohibited Substances. For purposes of security and confidentiality, this list shall be contained in a confidential document labelled “Confidential Addendum for Laboratories”. The IOC accredited laboratories are responsible for respecting the confidentiality of this document. The IOC Medical Director is responsible for distributing it or modifying it from time to time. The concentrations contained in the document represent the minimum concentrations of Prohibited Substances in the reaccreditation samples. The concentrations are not related to any parameters of an analytical essay such as cut-off values, limited detection or limits of quantitation.

## 12. COST OF ACCREDITATION AND REACCREDITATION

The IOC Medical Commission will establish, from time to time, the cost of accreditation and of reaccreditation. In addition, the laboratory must assume the travel expenses and accommodation of the delegate(s) of the IOC Medical Commission in the case of accreditation or inspection.

## 13. CORRESPONDENCE AND ENQUIRIES SHOULD BE ADDRESSED TO:

Medical Director  
International Olympic Committee  
Château de Vidy  
1007 Lausanne  
Switzerland

## ANNEX 1 OF APPENDIX B

### TEMPORARY ACCREDITATION

Conditions under which IOC laboratory accreditation may be temporarily transported (transferred) to a non-accredited facility for the duration of an international sporting event.

#### A - OBJECTIVES

- (1) To allow doping control to be efficiently conducted in a city hosting an international event and having appropriate laboratory facilities none of which has received IOC accreditation at the time of the event.
- (2) To allow the IOC Medical Commission, through expertise of its accredited laboratories, to assist cities hosting international events in setting the necessary grounds for eventual accreditation of their laboratories.

#### B - PREREQUISITES

- (1) The host city will arrange for basic laboratories and analytical equipment to be available. This may be accomplished by any of several means, i.e., temporarily renting appropriate equipment, using existing facilities in a public institution (university, hospital, etc.).
- (2) This facility will be staffed with local technical resources having acquired pertinent experience in the field of analytical toxicology as applied to the detection and/or identification of drugs and their metabolites in biological fluids.
- (3) A sufficient inventory of supplies will have been established well before commencement of the event, under the guidance of the head of the accredited laboratory who will take responsibility for the tests and the results.

#### C - CONDITIONS

- (1) Applications for temporary accreditation will be submitted by the head of the IOC accredited laboratory to the IOC Medical Director.
- (2) The application shall include all pertinent information to allow the IOC Medical Commission to evaluate the successful application of the doping control. Application must include details on the following aspects: General organization; Written agreements between parties involved; Facilities including detailed plan; Personnel including CV, experience, tasks and hierarchy; Methodologies to be applied; Major instrumentation available; Ancillary instrumentation; Sources of reagents and disposable materials; Reference substances available and sources for them; Details available on samples collection arrangements; Conditions and means for sample transportation and storage.

(3) The accreditation will be temporary and limited to the duration of the event and termination of the tests, whichever is the later.

(4) Senior personnel from the accredited laboratory will supervise analytical operations. These personnel should be in suitable proportion relative to the local technical staff.

(5) The head of the accredited laboratory will assume responsibility for all results generated by the laboratory during the period of the event.

## ANNEX 2 OF APPENDIX B

### RULES OF ETHICS

#### 1. COMPETITION TESTING

The laboratories shall only accept and analyse samples originating from known sources within the context of doping control programmes conducted in competitions organized by national and international sports governing bodies. This includes national and international federations, National Olympic Committees, national associations, universities, and other similar organizations. This rule applies to Olympic and non-Olympic sports.

Laboratories should ascertain that the programme calls for specimens collected according to IOC (or similar) guidelines. This includes collection, under observation, of A and B samples, appropriate sealing conditions, athletes' declaration with appropriate signatures, formal chain of custody conditions and adequate sanctions.

#### 2. OUT OF COMPETITION TESTING

The laboratories shall accept samples taken during training (or out-of-competition) only if the following conditions are simultaneously met:

- (a) that the samples have been collected and sealed under the conditions generally prevailing in competitions themselves as in 1. above;
- (b) if the collection is a part of a programme of a national or international sport governing body as defined in 1. above; and
- (c) if appropriate sanctions will follow a positive case.

Laboratories shall not accept samples from individual athletes on a private basis or from individuals acting on their behalf. No laboratory staff shall provide counsel, advice or information to Participants or others regarding avoidance, evasion or suppression of a positive test.

Laboratories shall not accept samples, for the purposes of either screening or identification, from commercial or other sources when the conditions in the above paragraph are not simultaneously met.

These rules apply to Olympic and non-Olympic sports.

#### 3. CLINICAL DIAGNOSTIC

Occasionally the laboratory is requested to analyse a sample for a banned drug or endogenous substance allegedly coming from a hospitalized or ill person in order to assist a physician in the diagnostic process. Under this circumstance, the laboratory director must explain the pre-testing issue to the requester and agree subsequently to analyse the sample only if a letter accompanies the sample and explicitly certifies that the sample is for medical diagnostic or therapeutical purposes.

The letter must also explain the medical reason for the test.

#### 4. CONFIDENTIALITY

The heads of laboratories, their delegates and laboratory staff shall not discuss or comment to the media on individual results.

#### 5. RESEARCH

Laboratories are entitled to participate in research programmes provided that the laboratory director is satisfied with the bona fide nature and the programmes have received proper ethical approval.

#### 6. REFERENCE BIOLOGICAL SAMPLES

Whenever collected, samples collection shall adhere to ethical principles established in each country for obtention of biological samples.

#### 7. NEW SUBSTANCES

The IOC accredited laboratories for doping control shall inform the IOC Medical Commission when they detect a new or suspicious doping agent.

#### 8. FAIR PRICING

Costs for analysis shall be set in accordance with the actual cost of the analysis in the country in which the laboratory is located.

## ANNEX 3 OF APPENDIX B

### RESTRICTIONS FOR LABORATORIES

#### PREAMBLE

In cases in which a laboratory fails in a Reaccreditation test or in Unannounced Proficiency tests the following restrictions shall apply:

Laboratories reporting a false negative result will be requested to take corrective actions. The IOC Medical Commission will decide whether the laboratory is granted full accreditation, if corrective actions are considered appropriate, or is downgraded to Phase II.

Laboratories reporting more than one false negative results will be downgraded to Phase II.

Laboratories reporting false positive results will be downgraded to Phase I.

#### 1. STATUS

In Phase II, suspension from confirmation of positive A.

In Phase I, suspension from all work at the international level; at the national level suspension from confirmation of positive A samples.

#### 2. LIMITATIONS FOR LABORATORIES IN PHASE I AND II

2.1 Suspension until further notice by the subcommission “Doping and Biochemistry of Sport” of the IOC Medical Commission from any confirmatory analysis;

2.2 If the laboratory concludes that the A sample contains a drug and/or metabolite from the current IOC list of prohibited substances, the laboratory shall, prior to reporting this to the authorities, forward, under strict chain of custody procedures, the remains of the A sample (and the B sample if under the control of the laboratory) to an IOC accredited laboratory which holds full accreditation. Analytical results obtained during screening analysis of A sample must be also submitted to the recipient laboratory;

2.3 In the event of a B confirmation, the analysis shall be performed by the laboratory to which the A sample was referred to;



### 3. ADDITIONAL LIMITATIONS FOR LABORATORIES IN PHASE I

Suspension until further notice by the subcommission “Doping and Biochemistry of Sport” of the IOC Medical Commission from testing samples originating from competitions involving competitors from countries other than the one in which the laboratory is located. The same suspension applies to out-of-competition testing except for the samples originating from the country in which the laboratory is located.

### 4. CORRECTIVE ACTIONS

4.1 Laboratory downgraded to phase I or phase II shall submit to the IOC Medical Commission a written report addressing the following points:

- a) identification of the problems which led to the suspension;
- b) assessment of the role, if any, of limitations imposed by: a lack of resources, equipment, space, personnel;
- c) a schedule and a plan for corrective actions of the problem(s);
- d) a list of authorities contacted to solve the problem(s).

4.2 After submission of the documentation, the subcommission will, if deemed necessary, challenge the laboratory with additional test samples. Once the corresponding results be received, the subcommission will propose the reclassification of the laboratory into one of the following categories:

- a) full accreditation
- b) Phase II
- c) Phase I
- d) withdrawal of accreditation.

### 5. OTHER LIMITATIONS

For any IOC accredited laboratory, fail to comply with the Rules of Ethics or to maintain ISO Guide 25 Accreditation (from 1st January [2000]) may lead to the withdrawal of IOC Accreditation.

## APPENDIX C

### SAMPLING PROCEDURES IN DOPING CONTROLS

#### 1. SELECTION OF ATHLETES

1.1 Doping controls shall be undertaken in all sports. The procedures which follow are those applicable to the Olympic Games. In other competitions, as well as in out-of-competition testing, the same procedures shall apply, *mutatis mutandis*.

1.2 The IOC Medical Commission, with the cooperation of the International Federation concerned and the Organising Committee, shall decide the number of competitors to be subjected to doping control per day in each sport. The available capacity of the laboratory shall be given due consideration.

1.3 The IOC Medical Commission and the representative of the International Federation concerned shall determine the number of competitors in each event to undergo a control, in accordance with the total number agreed upon under paragraph 1.2. In general, these controls will include the first four competitors in the final classification and others chosen at random.

1.4 Before the beginning of the Olympic Games, the International Federations participating shall inform the IOC Medical Commission as to the means of selecting those competitors to be checked at random.

1.5 Notwithstanding the foregoing, the IOC Medical Commission shall have the right to request, without justifying the reason therefore, that any competitor undergo a doping control at any time during the Games.

1.6 A competitor may be subject to doping control on more than one occasion during the Games.

1.7 The National Olympic Committee concerned, hereafter referred to as the delegation, shall be responsible for the transportation of its own competitors from the Doping Control Station to the Village after completion of the doping control procedures.

#### 2. COMPETITOR NOTIFICATION AND REGISTRATION FOR DOPING CONTROL

2.1 Immediately after the competition or after the determination of the final results, the competitor selected for doping control shall be handed a Doping Control Notification by a Doping Control Escort appointed by the Organizing Committee, hereafter referred to as the Escort. The Escort shall also give a Doping Control Pass which provides access to the Doping Control Station to the competitor. From then on the Escort shall be physically beside the competitor and keep the competitor under observation at all times and accompany him or her to the waiting room at the Doping Control Station designated on the Doping Control Notification. The competitor shall report with his/her accreditation card and Doping Control Pass to the

Doping Control Station immediately and no later than one hour after receipt of the Doping Control Notification.

2.2 A person (a team coach, a doctor or a team-mate of the competitor's delegation) may accompany the competitor to the Doping Control station and may watch all procedures except urination. He or she shall be given a Doping Control Pass by the Escort in order to be able to enter the Doping Control Station. This accompanying person shall possess proper accreditation and shall be a member of the same delegation as the competitor except, in special circumstances, the athlete may choose a member of another NOC.

2.3 The Doping Control Notification shall bear the competitor's name, accreditation and starting numbers, if available, and the statement that an accompanying person may be present when the competitor reports for Doping Control. The competitor has to be warned, by clear written notice in the Notification, of the possible consequences should he/she fail to report for the doping control within the given time limit.

2.4 Upon presentation of the Doping Control Notification the escort shall enter the time of notification and the competitor shall sign the form. The Doping Control Notification shall be in duplicate, one copy to be kept by the competitor and the original to be returned to the Doping Control Station by the Escort.

2.5 Upon arrival at the Doping Control station, the competitor and the accompanying person shall show their Doping Control Passes. The competitor and the escort shall hand the Doping Control Notification to a Doping Control Officer who records the actual time of arrival on the Doping Control Notification, signs it and verifies the identity of the competitor by means of the photo, name and accreditation number on the accreditation card.

2.6 The Doping Control Officer shall keep the Doping Control Notification returned by the Escort and return the copy to the competitor.

2.7 The actual time of arrival and the identity of the competitor shall then be noted on the Doping Control Official Record.

2.8 Should the competitor refuse to sign the Doping Control Notification or fail to report to the Doping Control Station within the time laid down in section 2.1, this fact shall be noted on the Doping Control Official Record. In this case the Doping Control Official record shall be signed by the Doping Control officer and the representative of the IOC Medical Commission and the representative of the International Federation concerned, if present. In addition, the Chairman of the IOC Medical Commission shall be informed immediately by the representative of the IOC Medical Commission. The Chairman of the IOC Medical Commission shall then decide on the further steps to be taken.

2.9 Should the competitor report to the Doping Control Station later than one hour after the time of notification, this fact shall be noted on the Doping Control Notification and the Doping Control Official Record. The sampling procedures shall still be carried out, as described below. The representative of the IOC Medical Commission shall inform the Chairman of the IOC Medical Commission immediately.

2.10 The competitor and the accompanying person shall remain in the Doping Control station waiting room under the supervision of the Doping Control Officer until he or she is called into a consulting area. The competitor and any personal belongings he/she or the accompanying person bring with them (clothing, bags, etc.) may be searched for evidence of manipulation, upon entering and leaving the Doping Control Station.

2.11 No photographs, video or tape recordings may be taken inside the Doping Control Station during the doping control procedure.

2.12 The original of the Doping Control Notification shall be appended to the Doping Control Official Record.

### 3. SAMPLE TAKING PROCEDURE

3.1 Only one competitor at a time shall be called into the consulting area.

3.2 In addition to the competitor and his/her accompanying person, only the following persons may be present in the consulting area:

- a representative of the IOC Medical Commission
- the Doping Control Medical Officer
- the Doping Control Technical Officer(s)
- a representative of the International Federation concerned
- an interpreter

3.3 The Doping Control Station shall contain a supply of:

- a) disposable collection vessels (contained in bags)
- b) disposable urine control kits (contained in bags)
- c) disposable partial sample kits (contained in bags)

The specifications of the collection vessel, urine control kit and partial sample kit are to be determined by the IOC Medical Commission in cooperation with the Organizing Committee.

3.4 The competitor shall select a collection vessel, visually check that it is empty and clean, proceed to the toilet and urinate a minimum of 75 ml into the collection vessel under the observation of the Doping Control Officer who shall be of the same gender as the competitor.

Any clothing preventing the direct observation of the urination shall be removed. The competitor shall return to the consulting area with the collection vessel containing the urine.

3.5 If the requested urine volume of 75 ml has been provided, the competitor shall select a urine control kit, open it and place the contents on the table in front of him/her. He/she shall check that the bottles are empty and clean.

The competitor shall pour approximately two thirds of the urine from the collection vessel into bottle A and one third into bottle B. A few drops of urine shall remain in the collection vessel. Next, the competitor shall close the two bottles hermetically and check that no leakage occurs. The Doping Control Officer may, with permission of the competitor, assist with the procedures outlined in this paragraph.

All remaining urine shall be destroyed immediately after bottles A and B have been sealed.

3.6 The Doping Control Officer shall measure the specific gravity and pH of the urine left in collection vessel. The urine pH should not be less than 5 and not greater than 7, and the urine should have a specific gravity of 1.010 or higher. If the sample does not meet these specifications, further samples may be required by the IOC Medical Commission representative.

3.7 The competitor shall declare to the Doping Control Officer any medication and nutritional supplements that he/she may have taken in the preceding three days. The Doping Control Officer shall record this statement on the Doping Control Official Record.

3.8. The Doping Control Officer shall check that the code numbers on the bottles and shipping containers are identical, and record the code number on the Doping Control Official Record. The competitor shall then check that the code numbers on the bottles and shipping containers are identical to that recorded on the Doping Control Official Record. The competitor shall place the bottles A and B into the respective shipping containers and close them carefully and the Doping Control Officer shall verify that these are completely closed.

3.9 The competitor shall certify, by signing the Doping Control Official Record, that the entire procedure has been performed according to the rules above.

Any irregularities identified by the competitor or the accompanying person shall be recorded on the Doping Control Official Record.

The Doping Control Official Record shall also be signed by the Doping Control Officer, by the IOC Medical Commission representative, and, if present, by the accompanying person and the representative of the International Federation concerned.

The competitor shall be given a copy of the Doping Control Official Record.

3.10 If the competitor refuses to give a sample of urine, the possible consequences shall be pointed out to him/her by the IOC Medical Commission representative. If the competitor still refuses, this fact shall be noted in the Doping Control Official Record. This shall be signed by the Doping Control Officer, the IOC Medical Commission representative, and, if present, the representative of the International Federation concerned. The competitor and the accompanying person may, if they wish, sign the Doping Control Official Record.

The IOC Medical Commission representative shall be responsible for communicating the refusal to the Chairman of the IOC Medical Commission.

3.11 If the competitor has produced less than the requested urine volume of 75 ml, the competitor shall select a partial sample kit and shall pour the urine from the collection vessel into the bottle. Then the competitor shall close the bottle and check that no leakage occurs.

The competitor shall check that the code numbers on the bottle and the partial sample container are the same. Next, the urine volume and code number shall be recorded on the Doping Control Official Record and the competitor shall confirm this by signing the Doping Control Official Record. Finally, the competitor shall insert the bottle into the partial sample container and close it completely. The Doping Control Officer shall verify that this is hermetically closed. The Doping Control Officer may, with the agreement of the competitor, assist with the procedures outlined in this paragraph.

The competitor shall return to the waiting room with the partial sample container until he/she is able to deliver urine again. When the competitor is ready to deliver a further urine sample, he/she shall return to the consulting area with the partial sample container, which shall be handed to the doping Control Officer who shall check that the partial sample container is intact and that the code number corresponds to that entered in the Doping Control Official Record.

The competitor shall then select a new collection vessel and enter the toilet where he/she shall urinate. The competitor shall return to Consulting Area, open the partial sample container and pour the content into the collection vessel. If the combined urine volumes are less than 75 ml, he/she shall select a new partial sample container and proceed according to the procedure outlined in this paragraph.

When the combined volumes total at least 75 ml, the urine sample shall be processed in accordance with the procedure outlined in paragraphs 3.5 to 3.9 above.

3.12 The original of the Doping Control Official Record and the annexed Doping Control Notifications shall be placed in an envelope and the copy shall be placed in a separate envelope. After recording on the outside of the envelopes the code numbers of the Doping Control Official Records contained therein and the code number of the transport container seals, the two envelopes shall be closed. The IOC Medical Commission representative shall be responsible for bringing the envelopes to the Chairman of the IOC Medical Commission. The envelopes containing the original and the copies shall be kept closed and placed in separate safes unless their opening is authorized by the Chairman of the IOC Medical Commission.

3.13 At the end of each doping control, the shipping containers containing the A and the B samples shall be placed in the respective A and B transport containers. Also, the corresponding laboratory copies for urine samples of the Doping Control Official Record shall be placed in a separate envelope which shall be placed in the transport container containing the A samples. Each transport container shall then be sealed with a numbered seal.

3.14 If one or more of the competitors cannot pass the doping control test at the venue station within the time limits which has been decided by the IOC Medical Commission and the Organizing Committee, the test may be performed at the Olympic Village Polyclinic, at the discretion of the IOC Medical Commission representative.

The competitor shall be accompanied by a Doping Control Officer, the IOC Medical Commission representative, and the accompanying person if he/she wishes. The IOC Medical Commission representative and the Doping Control Officer shall ensure that all the necessary material for doping control is available at the Olympic Village Polyclinic.

Samples which have been collected shall be transported to the Doping Control Laboratory in accordance with the procedure described in paragraphs 4.1 and 4.2 below.

#### 4. TRANSPORT AND RECEIPT OF THE SAMPLES

4.1 The Doping Control Transport Form shall be completed and given together with the sealed transport containers to the Doping control Courier, hereafter referred to as the Courier, who is in charge of transportation of samples collected at each venue to the Doping Control Laboratory. The records on this form shall include the signature and accreditation number of the Courier, the seal numbers of the transport containers, the venue from which the transport containers have come and the departure time of the Courier. The Doping Control Transport Form shall be signed by the IOC Medical Commission representative who is on duty and by the Doping Control Officer. The IOC Medical Commission representative shall be responsible for bringing the original of the Doping Control Transport Form to the Chairman of the IOC Medical Commission. The courier shall take a copy of the Doping Control Transport Form to be countersigned by the Head of Laboratory or staff member designated by him.

4.2 The courier shall take the sealed transport containers to the doping control laboratory without undue delay. At the laboratory, the identity of the courier and seals will be checked by the Head of Laboratory or staff member designated by him, and recorded in the allotted space on the copy of the Doping Control Transport Form. Upon delivery of the transport containers, the Head of Laboratory or staff member designated by him shall record the arrival time of the transport containers, check that the transport containers and their seals are intact, record these facts on the copy of the Doping Control Transport Form, and keep the copy of the Doping Control Transport Form.

After unsealing and opening the A transport container at the laboratory, the shipping containers therein shall be examined and the code numbers recorded.

The transport container containing the B samples shall be kept sealed at the laboratory under the direct control of the IOC Medical Commission and be opened only with the authorization of the Chairman of the IOC Medical Commission.

#### 5. SAMPLE ANALYSIS

5.1 The analysis of a sample shall be performed as soon as possible after its arrival at the Doping Control Laboratory.

5.2 The analysis of a sample shall be carried out in accordance with the methods which have been approved by the IOC Medical Commission.

5.3 In addition to the Head of the Laboratory and the laboratory staff, only the following persons shall be admitted to the laboratory during sample analysis:

- authorized members of the IOC Medical Commission
- persons with special authorization from the IOC Medical Commission

5.4 The Head of the Laboratory shall on a daily basis inform the Chairman of the IOC Medical Commission of the results of all the samples analysed.

5.5 Should the analysis of the A samples indicate a violation of the IOC doping control regulations, the Chairman of the Medical Commission shall immediately inform in writing the Chef de Mission of the Delegation of the competitor, or his representative. The B sample will be analysed, if such analysis is requested, at a time determined by the IOC Medical Commission. Such time shall be recorded in the communication to the Chef de Mission.

5.6 The analysis of B samples shall be carried out in the same laboratory and under the supervision of a representative of the IOC Medical Commission. The delegation in question shall be allowed to send a maximum of three representatives to the laboratory. Should the delegation not be present at the laboratory, at the time indicated, the representative of the IOC Medical Commission may decide to proceed to the B analysis. The Head of the Laboratory shall inform the Chairman of the IOC Medical Commission of the result of this analysis, which shall be regarded as final. The Chairman of the IOC Medical Commission shall be supplied with appropriate documentation of the results by the Head of the Laboratory.

5.7 Should the result of the B sample not confirm the result of A analysis, the case is subject to any decisions made in the context of the competition which may no longer be reversed, considered as negative. The Chairman of the IOC Medical Commission shall immediately inform the Chef de Mission of the delegation of the competitor.

5.8 Should the result of the A sample be positive, the Chairman of the IOC Medical Commission shall then call a meeting of the IOC Medical Commission, to which the competitor, not more than three representatives of the delegation concerned and a representative from the International Federation concerned shall be invited. Following this meeting, the IOC Medical Commission shall make a recommendation for the IOC Executive Board.

5.9 The Chairman of the IOC Medical Commission shall then forward this recommendation to the President of the IOC for submission to the IOC Executive Board, which shall be responsible for taking further action.



5.10 The Chef de Mission of the delegation of the competitor and the International Federation concerned shall be informed before any sanction is made public by the IOC Executive Board.

5.11 The Chairman of the IOC Medical Commission shall designate a representative of the Commission to remain at the doping control laboratory following the end of the Olympic Games until completion of the analyses and the sending of the results to the Chairman of the IOC Medical Commission.

5.12 The two sets of envelopes shall be forwarded to the IOC headquarters following the conclusion of the Olympic Games.

## 6. DELEGATION OF RESPONSIBILITIES

The Chairman of the IOC Medical Commission may delegate his responsibilities to such person or persons as he may designate, at his discretion, from time to time.

## 7. GLOSSARY

**DOPING CONTROL LABORATORY:** Relevant IOC accredited laboratory.

**DOPING CONTROL NOTIFICATION:** A form used for keeping a record of the notification procedure. The Doping Control Notification consists of one original and one copy. The original is given to the Chairman of the IOC Medical Commission. The copy is given to the competitor.

**DOPING CONTROL OFFICIAL RECORD:** A form used for keeping a record of the sample taking procedure. The Doping Control Official Record consists of one original and three copies. The original and one copy are given to the Chairman of the IOC Medical Commission. One copy is kept by the competitor and one copy is sent to the laboratory with the urine sample.

**DOPING CONTROL OFFICER:** Doping Control Medical Officer and Doping Control Technical Officer.

**DOPING CONTROL MEDICAL OFFICER:** A medical doctor who is in charge of and responsible for the Doping Control Station. He is answerable to the Chief Medical Officer of the relevant organizing committee.

**DOPING CONTROL TECHNICAL OFFICER:** A person who supervises notification and sample taking procedures. The Doping Control Technical Officers take instructions from the Doping Control Medical Officer.

**ESCORT:** A person responsible for delivering the Doping Control Notification to the selected competitor. This person will also accompany the competitor and watch him or her continuously until they reach the Doping Control Station. The Escorts take instructions from the Doping Control Medical Officer.

**COURIER:** Officer in charge of transportation of samples collected at each venue and taken to the Doping Control Laboratory.

**IOC MEDICAL COMMISSION REPRESENTATIVE:** person appointed by the Chairman of the IOC Medical Commission. His responsibility is to supervise the sample taking procedure and ensure that it is carried out according to the IOC Medical Commission's regulations.

**PARTIAL SAMPLE KIT:** A plastic bag containing one urine bottle with cap and one black shipping container. The partial sample kit is used for temporary storage of the urine sample when the total urine volume produced by the competitor is less than the requested quantity of 75 ml.

**TRANSPORT CONTAINER:** A bag into which the shipping containers can be placed for transportation to the laboratory. It is sealed with a plastic seal.

**URINE CONTROL KIT:** A plastic bag containing two urine bottles with caps, one marked "A" and one "B", and two shipping containers, one green and one yellow. The shipping containers are plastic containers for shipping and storing the urine bottles and are sealed with a system that ensures that they cannot be tampered with. The green shipping container is used for sample A and the yellow shipping container for sample B. The bottle labels show the minimum levels of urine they must contain and the IOC logo and code number. The shipping containers are embossed with the IOC logo and a code number, the number being the same as the bottle labels.

**DOPING CONTROL STATION:** Area of restricted access (waiting room and consulting area).

**CONSULTING AREA:** A large room divided into several booths.

**DISPOSABLE MATERIAL:** This should be checked prior to the Games for contamination and substances which might interfere with the analysis.

## APPENDIX D

### LABORATORY ANALYSIS PROCEDURES

#### 1. LABORATORY ANALYSIS PROCEDURES

Laboratory analysis procedures are described below. A more specific description may be found in the Amplification of ISO Guide 25 for Doping Control according to the IOC, which can be submitted to Applicants for IOC Eligibility (see 1; Appendix A) upon request to the IOC Medical Commission.

##### 1.1 General aspects

###### **a) Chain of custody:**

The laboratory must have written protocols designed to maintain control and accountability from the receipt of urine specimens until testing is completed, results are reported, and while specimens are in storage.

###### **b) Receiving/preparation:**

The laboratory shall be secure at all times: no unauthorized personnel shall be permitted. Upon receipt of specimens, accession personnel shall inspect packages for evidence of possible tampering and compare information on specimen bottles with that on chain of custody forms. Any discrepancies shall be properly noted and described. Any direct evidence of tampering shall be reported immediately to the sport organization and shall also be noted on the chain of custody form which shall accompany all specimens during laboratory possession.

Specimen bottles and original chain of custody forms will normally be retained within the accession area until all analyses have been completed. Aliquots and intra laboratory chain of custody forms shall be used by laboratory personnel for conducting the initial and confirmatory tests.

###### **c) Essential equipment:**

- Gas chromatography (GC)
- High Pressure Liquid Chromatography (HPLC)
- Mass spectrometry (MS) in combination with gas chromatography (GC)
- High Resolution Mass Spectrometry or Tandem MS
- Immunoassay equipment
- Additional or alternative equipment recommended by IOC Medical Commission according to new scientific developments. Information regarding those technologies, if any, may be requested from the IOC Medical Director.

#### **d) Screening procedures:**

The laboratory must have written protocols for their screening procedures.

Sensitive and comprehensive screening methods to eliminate “true negative” specimens from further consideration must be used. The initial screening procedures shall be an appropriate technique which meets the requirements of the IOC Medical Commission.

The following procedures represent minimum requirements:

For volatile doping agents excreted free: GC screening with a nitrogen specific detector (NPD) and capillary column, cross linked with a moderate polarity phase. Alternative detection by MS may be used.

For non volatile doping agents excreted as conjugates: GC/MS screening after hydrolysis and extraction, derivatization, crosslinked capillary column chromatography and detection by selected ion monitoring (mass specific detection).

High pressure liquid chromatography for quantification of caffeine.

For Anabolic steroids:

(1) For free steroids: extraction, derivatization and detection by selected ion monitoring (mass specific detection or nitrogen specific detection. Complementary appropriate immunoanalytical methods may be used.).

(2) For free plus conjugated steroids: after enzymatic hydrolysis, extraction, derivatization and detection by selected ion monitoring (mass specific detection). Alternatively separate extracts of the free and the conjugated fraction, may be performed, each one treated and analysed as described above.

(3) For low concentrations of anabolic agents, analytical methods capable to reach 2 ng/ml detection limit such as High Resolution Mass Spectrometry and Tandem (MS/MS) Mass Spectrometry are requested to the laboratories accredited by the IOC for doping control analyses. Validation data for other techniques should be presented to the subcommission Doping and Biochemistry of Sport for their approval

For Acidic substances, e.g., diuretics and probenecid: Extraction at suitable pH and derivatization, GC/MS with detection by full scan or selected ion monitoring (mass specific detection). Alternatively, extraction and analysis by high pressure liquid chromatography.

For hCG: a validated immunoassay to detect and quantitate hCG. For confirmation, a second different immunoassay is required. For other peptidic hormones: specific techniques and methodologies will be needed following the evolution of scientific knowledge on this field. Refer to the IOC Medical Commission for updated information.

Laboratories wishing to use screening procedures other than those required by the IOC Medical Commission shall submit their methods for written approval by the IOC Medical Commission.

**e) Confirmation:**

A second aliquot of the same sample is used for confirmation. Mass spectrometry (MS) is the only authorized confirmation method except for peptide hormones and glycoproteins.

MS may be applied in conjunction with gas chromatography (GC) or high performance liquid chromatography (HPLC). To exclude possible interferences from the biological materials the sample preparation, including the derivatization as well as the polarity of the gas chromatographic column can be modified whenever possible or necessary to exclude possible interferences as compared with those used for screening.

**f) Specimen processing:**

Laboratories will normally process specimens by grouping them into batches. The number of specimens in each batch may vary significantly depending on the size of the laboratory and its workload. When conducting either screening or confirmatory testing, every batch shall contain an appropriate number of quality control samples.

## 1.2 Reporting results

The report shall contain the specimen number assigned by the submitting authority, and results of the tests. All specimens negative on the initial test or negative on the confirmatory test shall be reported as negative.

Only specimens confirmed positive shall be reported positive for a specific Substance. Results may be transmitted by various electronic means (e.g., teleprinters, facsimile, or computer) in a manner consistent with a particular program. Copies of all analytical results shall be available from the laboratory when requested by an appropriate authority. The IOC Medical Commission suggests the following reporting format for positive analytical results on sample A.

### 1.2.1. Administration:

- a) Code number
- b) Name and date of competition
- c) Date of receipt of samples at the laboratory
- d) Confirmation that the seal of the container was intact
- e) Confirmation that the seal of the bottle (if any) was intact
- f) Testing programme (in or out-of-competition)
- g) Analytical findings

### 1.2.2. Analytical results:

a) pH, specific gravity and appearance of the sample, determined by the laboratory at the time of the first aliquoting.

b) Generic name of the identified Prohibited Substance(s) (e.g. testosterone, caffeine, etc.) with indication of the excess above a fixed cut-off, if appropriate.

The laboratory should also be prepared to supply the following information on request by the relevant authority in connection with the identification of the Prohibited Substance(s) recorded in 1.2.2.(b) above.

a) Summary of the analytical procedures performed in the screening and in the identification stages.

b) Copies of the analytical data relevant to establishing the presence of substances. Normally this documentation will include the analytical data of a urine blank, a positive control and the sample.

### 1.2.3 Statistics of IOC accredited laboratories:

The laboratory shall provide the IOC Medical Director with a summary of urine analysis tests without any personal identifying information, but subdivided into categories as requested by the IOC Medical Commission. The format for the reporting will be as defined by the IOC Medical Commission.

### 1.2.4 Archiving of analytical files results:

All records pertaining to a given urine specimen shall be retained by the laboratory for a minimum of two (2) years after reporting the results on the A sample. In the case of a positive A sample, this period should be extended to five (5) years.

## 1.3 Long-term storage

The sealed B specimens corresponding to an analytically positive A sample shall be retained and placed in properly secured long-term 4 C or less storage for at least 90 days after reporting the A result. Within this period a governing body may request the laboratory to retain the specimen for an additional period of time. This ensures that the urine specimen will be available for a possible retest during any administrative or disciplinary proceeding. If the laboratory does not receive a request to retain the specimen during the initial 90 day period, the specimen may be discarded. However, specific national programs may have longer storage requirements. The sealed B specimens corresponding to an analytically negative A sample should be retained for 30 days after the reporting of the results.

## 1.4 Security

The laboratory facilities shall use appropriate security measures to ensure limited and/or controlled access.

## 1.5 Subcontracting

The drug testing laboratory shall perform all work with its own personnel and equipment and within its premises, unless otherwise authorized by the IOC Medical Commission.

## 2. ANALYTICAL PROCEDURES: A SUMMARY OF ORGANIZATIONAL MATTERS

### 2.1 Outline of analytical protocols:

#### 2.1.1 Reception of samples

- a) Verify code number, seals, forms, total number of samples
- b) Note if code numbers are not readable or not in agreement with the forms or if the bottles or seals are broken or otherwise defective

#### PreScreening protocols:

- a) Verify the pH after opening the bottle: is the pH basic?
- b) Verify the colour and appearance of urine: is the urine diluted?

Abnormal values may change sample preparation procedures.

#### Screening protocols:

#### 2.1.2 If a positive result is found

- a) Perform additional GC, HPLC or GC/MS tests with the residues of the first extraction.
- b) Reextraction of a second aliquot of the A bottle. If appropriate, modify the extraction procedure, if possible to get a cleaner and a more concentrated extract. Modify the derivatization, e.g., no derivative, TMS, NTFATMS, EnolTMS, Methoxyaminederivative.
- c) GCMS obtain correct retention time
  - correct MS
  - full scan
  - selected ion monitoring (with adequate criteria for identification) if a full scan is not possible.

d) Compare the analytical data of the positive sample with that of the reference urine that was processed concomitantly.

2.1.3 Verify all the information collected if in agreement with the known facts and structure of doping agent or metabolite(s).

2.1.4 Before reporting a positive result, verify whether the B sample is securely stored, the seal intact and the code number correct.

## 2.2 Guidelines for the analysis of the B sample

2.2.1 Identify the persons wishing to observe the analysis of the B sample athlete, expert, representative of the federation, etc.

2.2.2 When not in conflict with other regulations, present the analysis report of the A sample and the analytical data, leading to the conclusion that the reported Prohibited Substance is present in the urine of the A sample.

2.2.3 Explain the analytical methods used in the analysis of the A sample and explain which analytical method will be used to analyze the B sample taking into account the result of the A sample. As the purpose of the B analysis is only to demonstrate that the Prohibited Substance found in the A sample is also present in the B sample, the analytical strategy for the B analysis may be simpler than the one used for the A sample, as far as the presence of the Prohibited Substance or its relevant metabolite is unambiguously established, at the direction of the Director of the laboratory.

2.2.4 Present the B sample for inspection. Verify that the bottles are properly closed, that the seal of the sample is not broken and that the code number corresponds to the code number in the corresponding form. Invite the witness or witnesses (if present) to add additional comments if appropriate. Sign a document confirming the integrity of the B sample.

2.2.5 Break the seal, take the necessary aliquots of the B sample in presence of the witnesses and proceed with the analysis.

2.2.6 Close the bottle of the B sample and keep it in a locked cool place.

2.2.7 Take through the procedure, as a minimum

- a) blank urine
- b) sample aliquots



c) a reference urine collected after application of the dope agent or spiked with appropriate reference material.

2.2.8 Give the witnesses the opportunity to follow all steps of the sample preparation, extraction, concentration, derivatization and instrumental analysis.