



WADA Technical Document for Sport Specific Analysis

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1. Introduction

As part of WADA's move towards ensuring *Anti-Doping Organizations (ADOs)* implement more intelligent and effective anti-doping programs, Article 5.4.1 of the 2015 World Anti-Doping Code (WADC2015) states – “WADA, in consultation with International Federations and other *Anti-Doping Organizations*, will adopt a Technical Document under the *International Standard for Testing and Investigations (ISTI)* that establishes by means of a risk assessment which *Prohibited Substances* and/or *Prohibited Methods* are most likely to be abused in particular sports and sports disciplines.”

This Technical Document for Sport Specific Analysis (TDSSA) is intended to ensure that the *Prohibited Substances* within the scope of the TDSSA and other tools that support the detection of *Prohibited Substances* and/or identify the *Use of Prohibited Methods* such as the Athlete Biological Passport are subject to an appropriate and consistent level of analysis and adoption by all *ADOs* that conduct *Testing* in those sports/disciplines deemed at risk. Compliance with the TDSSA is mandatory under the WADC2015.

The development of the TDSSA is based on a scientific approach linking physiological and non-physiological demand of *Athlete* performance with the potential ergogenic benefit of those *Prohibited Substances* within the scope of the TDSSA. The TDSSA complements other anti-doping tools and programs such as the *Athlete Biological Passport (ABP)*, intelligence gathering and investigations.

A Minimum Level of Analysis (MLA) is specified for the *Prohibited Substances* within the scope of the TDSSA for each sport/discipline, expressed as a percentage of the total number of eligible Tests and based on a Physiological Risk Assessment of that sport/discipline. The full MLA list for each sport/discipline is provided in Appendices 1 and 2 of this Technical Document.

The MLA applies to *Testing* conducted by all *ADOs* on *International-Level Athletes* and *National-Level Athletes* as defined by the applicable *ADO*.

The MLAs for each sport/discipline should not be considered as the precise level of analysis that an *ADO* should implement in that sport/discipline. *ADOs* are encouraged to exceed the MLAs where they believe it is appropriate to do so, based on their Risk Assessment. *ADOs* are also encouraged to take advantage of Article 6.4.1 of the WADC2015, which provides for *ADOs* to

request that Laboratories analyze their *Samples* using more extensive menus than those prescribed in this Technical Document.

The full *Prohibited List* remains applicable to all sports, including sports that are not covered by the TDSSA and/or for which the MLA is zero. Any *ADO* may, at its own discretion, request a Laboratory to analyze any *Sample* for the *Prohibited Substances* within the scope of the TDSSA at any time.

Laboratories under Article 6.4.3 of the WADC2015 may also, at their own initiative and expense, analyze *Samples* for *Prohibited Substances* and/or *Prohibited Methods* not included in the *Sample* analysis menu described in the TDSSA or specified by the Testing Authority.

In addition to the mandatory provisions of this Technical Document which include Appendices 1 and 2, *WADA* has developed supporting documents intended to assist with the implementation and application of the TDSSA. These resources are included herein as Supporting Documents A and B but are not to be considered appendices of the TDSSA itself as these will be amended from time to time to reflect the ongoing needs of stakeholders and evolving best practice.

Defined terms in the *Code*, *International Standards* and the TDSSA can be found in Article 10 of the TDSSA.

2. Objectives of the TDSSA

- 2.1. To protect clean *Athletes* by establishing MLAs for those *Prohibited Substances* within the scope of the TDSSA that are at risk of abuse in particular sports or disciplines.
- 2.2. To enhance the effectiveness of anti-doping programs.
- 2.3 To create accountability for stakeholders including International Federations (IFs), *National Anti-Doping Organizations (NADOs)*, *Major Event Organizations (MEOs)* and other TAs that conduct *Testing* on such sports and disciplines by implementing the required MLAs.
- 2.4 To maintain and build Laboratory capacity and proficiency for the detection of those *Prohibited Substances* within the scope of the TDSSA.

3. Scope

3.1. Level of *Athlete*

The TDSSA applies to *Testing conducted on International-Level Athletes* and *National-Level Athletes* (as defined by IFs and *NADOs*, respectively). *ADOs* may also apply the TDSSA to other *Athletes* within their jurisdiction. For the purpose of meeting the MLAs, only analyses conducted on *International-Level Athletes* and *National-Level Athletes* will be used to assess compliance with the TDSSA. All *Athletes* who compete in Major Events under the jurisdiction of a *MEO* will, for the purpose of the TDSSA, be presumed to be *International-Level Athletes* or *National-Level Athletes*.

3.2. *Prohibited Substances* on the TDSSA

The *Prohibited Substances* within the scope of the TDSSA are normally not part of a routine standard urine analysis and require specialized analysis methods.

The *Prohibited Substances* within the current scope of the TDSSA are:

- Erythropoiesis Stimulating Agents (ESAs). Section S2.1.1
- Growth Hormone (GH). Section S2.5
- Growth Hormone Releasing Factors (GHRFs) including Growth Hormone Releasing Hormone (GHRH) and its analogues, Growth Hormone Secretagogues (GHS) and Growth Hormone Peptides (GHRPs). Section S2.5

With effect on 1 January 2017, GH and GHRFs will be subject to separate MLAs. The MLAs for GH and GHRFs are each the same as the combined GH/GHRF MLA that was previously attributed to the sport/discipline. For example, if the GH/GHRF combined MLA was 10% then it now becomes 10% for GH and 10% for GHRFs.

Compliance with the GHRFs MLAs and GH MLAs will be mandatory from 1 January 2017 and 1 January 2018 respectively. In 2017 ADOs should maintain or preferably exceed their existing volume of GH analysis whilst putting in place the necessary measures to comply with the GH MLAs in 2018.

Information about the *Prohibited Substances* described above and guidance on *Testing* is provided within the TDSSA *Testing Guides*.

3.3 Implementation of the ABP haematological module

The ABP haematological module plays an important part in the targeting of *Athletes* for *Testing*, the detection of ESAs and prosecution of anti-doping rule violations for *Use of blood doping methods*. Therefore, to further protect clean *Athletes* and enhance the global effectiveness of *Testing* programs, effective 1 January 2018 the implementation of an ABP haematological module for sports and disciplines with an ESAs MLA equal to or greater than 30% will be a **mandatory** component of compliance with the TDSSA. ADOs should prepare for the implementation of the ABP haematological module (as necessary) prior to January 2018.

Implementation of the ABP haematological module for those sports or disciplines for which the MLA for ESAs is 15% is **strongly recommended**. Those sports/disciplines for which the MLA for ESAs is 10% are encouraged to consider the benefits of implementing the *ABP* haematological module.

Implementation of the *ABP* haematological module also enables ADOs to seek a reduction in the MLA percentage for ESAs, subject to meeting the criteria outlined in Article 6 of the TDSSA.

4. MLA for Sports and Disciplines

Consistent with Article 5.4.1 of the WADC2015, WADA has consulted with IFs and other ADOs in the development of the TDSSA.

MLAs for sports/disciplines are located at:

- **Appendix 1** – Minimum Levels of Analysis for Sports and Disciplines of Olympic, IOC Recognized and Non-Recognized International Federations¹
- **Appendix 2** – Minimum Levels of Analysis for Sports and Disciplines for *Athletes* with an Impairment

5. Test Distribution Planning and MLA Percentages

5.1. Test Distribution Plan (TDP)

In accordance with Article 4.2 of the ISTI, each *ADO* must undertake and document in good faith a Risk Assessment² as part of the development of an effective TDP under its jurisdiction.

The TDSSA is one important and mandatory part of the Risk Assessment and the overall TDP development process. Once a TDP is developed, each *ADO* will be responsible for managing the implementation of the TDSSA throughout their *Testing* year by applying the required MLAs in a targeted manner to defined *Athletes*.

5.2. Applying MLAs to the TDP

Once an *ADO* has conducted the required Risk Assessment and assigned Tests to a sport/discipline within its TDP, each *ADO* shall apply the prescribed MLA to the number of Tests allocated to each sport/discipline to determine the number of analyses required for each *Prohibited Substance* category as prescribed in the TDSSA.

One Test includes any number of *Samples* that may be collected from one *Athlete* during a single Sample Collection Session. For example, a Sample Collection Session in which one urine *Sample* and two blood *Samples* are collected will count as one Test.

As a further example in applying the MLA to a TDP, if an *ADO's* TDP for a sport/discipline consists of 100 Tests and its MLAs are 60% for ESAs, 10% for GH and 10% for GHRFs, then the minimum number of analyses an *ADO* should conduct is as follows:

- 60% ESAs analyses to be conducted in either urine or blood;
- 10% GH analysis in blood (serum) ; and
- 10% GHRFs analysis in urine.

ADOs can request multiple analyses on *Samples* collected during the same Sample Collection Session. In the example above, the absolute minimum number of Sample Collection Sessions could be 60. This is on the basis that the required number of GH and GHRF analyses are performed on those *Athletes* who are also being tested for ESAs.

The remaining 40 Tests from the 100 Tests would then be subject to either the standard routine urine analysis or a greater level of analysis, which *ADOs* are encouraged to do.

Any MLA that does not equal a whole number when applied to total Tests, shall be rounded up to the nearest whole number. For example, if five Tests are planned in a

¹ Includes only those non-IOC recognized sports that are members of the Alliance of Independent recognized Members of Sport (AIMS)

² *ADOs* will be required to submit a documented risk assessment as part of WADA's compliance monitoring process in 2017

particular sport/discipline, for which the ESA MLA is 10%, the ADO will be required to conduct a minimum of one ESA analysis.

Where the ADO has intelligence that would lead to a more effective use of the one analysis on an athlete in a sport/discipline of higher risk than the ADO may reallocate that analysis.

Compliance with the MLAs is mandatory. However, the selection of the *Athletes* to be tested, the selection of the *Sample* matrices collected (*i.e.* urine or blood) and the timing of those Tests remain at the discretion of the ADO.

Achieving the MLAs for the applicable sports or disciplines should be based on quality of *Testing*, and not simply reaching a required number of Tests. Thus, decisions should be based on intelligence where possible and may include *ABP* information, whereabouts, timing of competition periods, and any other information that may affect the pattern and the timing of *Use of the Prohibited Substances* within the scope of the TDSSA. The aim is to test the right *Athletes* for the right *Prohibited Substance(s)* at the right time.

Further guidance on the implementation of the TDSSA within a TDP can be found in the WADA "*Guidelines for Implementing an Effective Testing Program*", the TDSSA *Testing Guides* and the Frequently Asked Questions (FAQs) located in Supporting Document B.

5.3. Sports and Disciplines with MLAs of zero

Those sports/disciplines that are determined to be at minimal physiological risk to the abuse of the *Prohibited Substances* within the scope of the TDSSA and for which the associated MLA is zero, shall remain subject to *In-Competition and Out-of-Competition* routine standard urine analysis menus.

However, such sports or disciplines may be subject to Testing at any time by any ADO for those *Prohibited Substances* within the scope of the TDSSA including at a level greater than listed.

6. Seeking a reduction in the MLAs

Article 6.4.2 of the WADC2015 affords ADOs the opportunity to request that Laboratories analyze *Samples* with less extensive menus than those prescribed by the TDSSA. Such requests must satisfy WADA that "*because of the particular circumstances of their country or sport (...) less extensive analysis would be appropriate*". Article 4.7.2 of the ISTI goes further in declaring that WADA may approve reductions only when it is satisfied that such reductions "*will lead to the most intelligent, effective and efficient use of available Testing resources*".

Compliance with the TDSSA alone is not sufficient to demonstrate intelligent, effective and efficient use of available resources. Consequently, the implementation of other 'intelligent *Testing*' strategies will be required before a reduction in MLAs can be considered and approved. This includes but is not limited to; the implementation of the haematological module of the ABP, target testing based on recommendations from an Athlete Passport Management Unit (APMU), the gathering and use of intelligence to inform *Testing* and conduct investigations, the sharing of *Testing* information with other ADOs or other sport specific, intelligent or innovative anti-doping strategies.

WADA may approve a reduction of up to 50% of the MLA based on its decision as to whether the required criteria have been met. WADA shall consider the following criteria when evaluating possible reductions:

6.1 Implementation of the haematological module of the *ABP* (applies to the MLA for ESAs only).

To be eligible for a reduction based on the adoption of the haematological module of the *ABP*, the *ADO* must be able to demonstrate that:

6.1.1. The *ABP* program of the sport/discipline has been operational for not less than six months;

6.1.2. The *ABP* program is compliant with the *WADA ABP Guidelines* and relevant Technical Documents, including:

The implementation of a real-time *Target Testing* process that acts upon the recommendations of an APMU or other expert group with reference to ESAs;

6.1.3. All relevant *ABP* data, including *APMU* reports, are available in *ADAMS* or another system approved by *WADA* to permit oversight by *WADA*;

6.1.4 The *ABP* pool includes the majority of relevant *Athletes* from whom an appropriate number of *ABP Samples* have been collected and analyzed annually as recommended by the *ABP Guidelines*, an APMU or other expert group.

The magnitude of any reduction will be determined by *WADA* taking into account all the circumstances including the level of *ESA* testing conducted before the implementation of the *TDSSA*.

6.2. Particular Circumstances

An application for a reduction in *MLA* due to particular circumstances may only be made for the *Prohibited Substances* within the scope of the *TDSSA*. Such particular circumstances must be clearly outlined and supported with relevant documentation.

The burden is therefore on the *ADO* to demonstrate that a reduction in the *MLA* for a sport/discipline will lead to the most intelligent, effective and efficient use of available *Testing* resources.

6.3. Application

The process, template application form and the level of information required to support an application for reduction in *MLA* is provided in Supporting Document A. All applications for reduction must be submitted to *WADA* in advance.

6.4. Approval Period

A reduction in *MLA* will remain valid for the period approved by *WADA* provided that all specific conditions are continually adhered to by the *ADO*. If any of the conditions change during the approval period, *ADOs* must notify *WADA*.

WADA may review its approval for reduction of an ADO's MLA at any time.

7. Documentation

ADOs shall provide the following information to ensure that WADA can monitor and evaluate an ADO's implementation of the TDSSA accurately:

7.1. Sport and Discipline

To ensure accurate recording of *Sample* analysis by the Laboratories and reporting of statistics in *ADAMS*, *Testing Authorities*, Sample Collection Authorities and their Doping Control Officers must ensure that the correct sport **and discipline** for the *Athlete* is recorded at a minimum on the Laboratory copy of the *Doping Control* Form (DCF).

7.2. Type of Analysis for each *Sample*

The request for analysis of the *Prohibited Substances* within the scope of the TDSSA shall be provided to the Laboratory for each *Sample* to ensure the Laboratory conducts the correct analyses and accurately reports the results in *ADAMS*.

The specific type of analysis required for each *Sample* shall be recorded on the chain of custody (or equivalent) documentation shipped with the *Samples* to the Laboratory or by an otherwise effective communication method that has been agreed with the Laboratory responsible for analyzing an ADO's *Samples*.

As per the ISTI the type of analysis requested shall not be recorded on the DCF.

7.3. Level of *Athlete* being Tested

The TDSSA is applicable to *International-Level Athletes* and *National-Level Athletes* as defined by each IF or NADO. To assist with the monitoring of an ADOs' TDP and compliance with the application of the MLAs to those defined *Athletes*, it is recommended that ADOs develop a system to record the level of *Athlete* or alternatively the level of *Athlete* can be recorded in *ADAMS*. ADOs may be requested to provide such data to WADA as part of WADA's wider compliance program.

8. Data Analysis and Monitoring

For TDSSA monitoring and compliance purposes WADA will assess whether the ADO has complied with the MLAs based on *Doping Control* statistics contained in *ADAMS*³. This will include, but not be limited to, the following elements:

- Total number of Tests and types of analyses;
- MLA achieved for each *Prohibited Substance* category within the scope of the TDSSA for each sport/discipline;
- Number of *Athletes* tested;
- Laboratory capacity; and
- Implementation of an ABP haematological module for sports/disciplines with an ESA MLA equal to or greater than 30% (from 1 January 2018).

³ ADOs can monitor their implementation of the TDSSA through *ADAMS* using the TDSSA Reporting Guide

These statistics and any other relevant information will also be used to review and modify the TDSSA over time.

It is expected that *ADOs* will also utilize this data to assist in the review of their TDP and the management of their *Doping Control* programs.

A wider evaluation of *ADOs* compliance with the TDSSA, will be addressed through WADA's compliance and monitoring program, and will include the review of the methods the *ADOs* applied to the implementation of the Tests to meet the MLAs as outlined in the ISTI, including but not limited to the assessment of risk among *Athletes* within the jurisdiction of the *ADO*, and the use of information and intelligence in the selection and timing of Tests on defined *Athletes*.

As outlined in Section 6, *ADOs* may apply for a reduction in the MLAs based on their implementation of an *ABP* haematological module and/or intelligence led Testing strategies that will lead to the most intelligent, effective and efficient use of available resources.

9. Review of TDSSA

As part of an ongoing review process, WADA will monitor the implementation of the TDSSA in consultation with *ADOs* and Laboratories. Revisions to the TDSSA may be issued from time to time based on such consultation or for other reasons at WADA's discretion (e.g. revisions to the *Prohibited List* or inclusion of a *Prohibited Substance* and/or *Prohibited Method* that is not within the scope of the TDSSA). *ADOs* will be provided with prior notice of such modifications taking effect.

10. Definitions

10.1 Defined terms from the WADC2015 that are used in the TDSSA

ADAMS: The Anti-Doping Administration and Management System is a Web based database management tool for data entry, storage, sharing, and reporting designed to assist stakeholders and WADA in their anti-doping operations in conjunction with data protection legislation.

Anti-Doping Organization: A *Signatory* that is responsible for adopting rules for initiating, implementing or enforcing any part of the *Doping Control* process. This includes, for example, the International Olympic Committee, the International Paralympic Committee, other *Major Event Organizations* that conduct *Testing* at their *Events*, WADA, International Federations, and *National Anti-Doping Organizations*.

Athlete: Any *Person* who competes in sport at the international level (as defined by each International Federation) or the national level (as defined by each *National Anti-Doping Organization*). An *Anti-Doping Organization* has discretion to apply anti-doping rules to an *Athlete* who is neither an *International-Level Athlete* nor a *National-Level Athlete*, and thus to bring them within the definition of "Athlete." In relation to *Athletes* who are neither *International-Level* nor *National-Level Athletes*, an *Anti-Doping Organization* may elect to: conduct limited *Testing* or no *Testing* at all; analyze *Samples* for less than the full menu of *Prohibited Substances*; require limited or no whereabouts information; or not require advance *TUEs*. However, if an Article 2.1, 2.3 or 2.5 anti-doping rule violation is committed by any *Athlete* over whom an *Anti-Doping Organization* has authority who competes below the international or national level, then the *Consequences* set forth in the *Code* (except Article 14.3.2) must be applied. For purposes of

Article 2.8 and Article 2.9 and for purposes of anti-doping information and education, any *Person* who participates in sport under the authority of any *Signatory*, government, or other sports organization accepting the *Code* is an *Athlete*.

[Comment: This definition makes it clear that all International-Level Athletes and National-Level Athletes are subject to the anti-doping rules of the Code, with the precise definitions of international- and national-level sport to be set forth in the anti-doping rules of the International Federations and National Anti-Doping Organizations, respectively. The definition also allows each National Anti-Doping Organization, if it chooses to do so, to expand its anti-doping program beyond International-Level Athletes or National-Level Athletes to competitors at lower levels of Competition or to individuals who engage in fitness activities but do not compete at all. Thus, a National Anti-Doping Organization could, for example, elect to test recreational-level competitors but not require advance TUEs. But an anti-doping rule violation involving an Adverse Analytical Finding or Tampering, results in all of the Consequences provided for in the Code (with the exception of Article 14.3.2). The decision on whether Consequences apply to recreational-level Athletes who engage in fitness activities but never compete is left to the National Anti-Doping Organization. In the same manner, a Major Event Organization holding an Event only for masters-level competitors could elect to test the competitors but not analyze Samples for the full menu of Prohibited Substances. Competitors at all levels of Competition should receive the benefit of anti-doping information and education.]

Athlete Biological Passport: The program and methods of gathering and collating data as described in the International Standard for Testing and Investigations and International Standard for Laboratories.

Code: The World Anti-Doping Code.

Doping Control: All steps and processes from Test Distribution Planning through to ultimate disposition of any appeal including all steps and processes in between such as provision of whereabouts information, Sample collection and handling, laboratory analysis, TUEs, results management and hearings.

Event: A series of individual *Competitions* conducted together under one ruling body (e.g., the Olympic Games, FINA World Championships, or Pan American Games).

Event Period: The time between the beginning and end of an *Event*, as established by the ruling body of the *Event*.

In-Competition: Unless provided otherwise in the rules of an International Federation or the ruling body of the *Event* in question, "*In-Competition*" means the period commencing twelve hours before a *Competition* in which the *Athlete* is scheduled to participate through the end of such *Competition* and the *Sample* collection process related to such *Competition*.

International-Level Athlete: *Athletes* who compete in sport at the international level, as defined by each International Federation, consistent with the International Standard for Testing and Investigations.

[Comment: Consistent with the International Standard for Testing and Investigations, the International Federation is free to determine the criteria it will use to classify Athletes as International-Level Athletes, e.g., by ranking, by participation in particular International Events, by type of license, etc.]

However, it must publish those criteria in clear and concise form, so that Athletes are able to ascertain quickly and easily when they will become classified as International-Level Athletes. For example, if the criteria include participation in certain International Events, then the International Federation must publish a list of those International Events.]

International Standard: A standard adopted by WADA in support of the Code. Compliance with an *International Standard* (as opposed to another alternative standard, practice or procedure) shall be sufficient to conclude that the procedures addressed by the *International Standard* were performed properly. *International Standards* shall include any *Technical Documents* issued pursuant to the *International Standard*.

Major Event Organizations: The continental associations of *National Olympic Committees* and other international multisport organizations that function as the ruling body for any continental, regional or other *International Event*.

National Anti-Doping Organization: The entity(ies) designated by each country as possessing the primary authority and responsibility to adopt and implement anti-doping rules, direct the collection of *Samples*, the management of test results, and the conduct of hearings at the national level. If this designation has not been made by the competent public authority(ies), the entity shall be the country's *National Olympic Committee* or its designee.

National-Level Athlete: Athletes who compete in sport at the national level, as defined by each *National Anti-Doping Organization*, consistent with the International Standard for Testing and Investigations.

Out-of-Competition: Any period which is not *In-Competition*.

Prohibited List: The *List* identifying the *Prohibited Substances* and *Prohibited Methods*.

Prohibited Substance: Any substance, or class of substances, so described on the *Prohibited List*.

Regional Anti-Doping Organization: A regional entity designated by member countries to coordinate and manage delegated areas of their national anti-doping programs, which may include the adoption and implementation of anti-doping rules, the planning and collection of *Samples*, the management of results, the review of *TUEs*, the conduct of hearings, and the conduct of educational programs at a regional level.

Sample or Specimen: Any biological material collected for the purposes of *Doping Control*.

Target Testing: Selection of specific *Athletes* for *Testing* based on criteria set forth in the International Standard for Testing and Investigations.

Testing: The parts of the *Doping Control* process involving test distribution planning, *Sample* collection, *Sample* handling, and *Sample* transport to the laboratory.

Use: The utilization, application, ingestion, injection or consumption by any means whatsoever of any *Prohibited Substance* or *Prohibited Method*.

WADA: The World Anti-Doping Agency.

10.2 Defined Terms from the International Standards that are used in the TDSSA

Athlete Passport Management Unit (APMU): A unit composed of a *Person* or *Persons*, designated by the *Anti-Doping Organization*, responsible for the administrative management of the Passports advising the *Anti-Doping Organization* for intelligent, *Targeted Testing* liaising with the Expert Panel compiling and authorizing an *Athlete Biological Passport* Documentation Package and reporting Adverse Passport Findings.

Doping Control Officer (or DCO): An official who has been trained and authorized by the *Sample Collection Authority* to carry out the responsibilities given to DCOs in the International Standard for Testing and Investigations.

Doping Control Station: The location where the *Sample Collection Session* will be conducted.

Laboratory(ies): (A) *WADA*-accredited laboratory(ies) applying test methods and processes to provide evidentiary data for the detection of *Prohibited Substances, Methods* and *Markers* on the *Prohibited List*, and if applicable, quantification of a Threshold Substance in *Samples* of urine and other biological matrices in the context of anti-doping activities.

Major Event: A series of individual international *Competitions* conducted together under an international multi-sport organization functioning as a ruling body (e.g., the Olympic Games, Pan American Games) and for which a significant increase of resources and capacity, as determined by *WADA*, is required to conduct *Doping Control* for the *Event*.

Sample Collection Authority: The organization that is responsible for the collection of *Samples* in compliance with the requirements of the International Standard for Testing and Investigations, whether (1) the *Testing Authority* itself; or (2) another organization (for example, a third party contractor) to whom the *Testing Authority* has delegated or subcontracted such responsibility (provided that the *Testing Authority* always remains ultimately responsible under the *Code* for compliance with the requirements of the International Standard for Testing and Investigations relating to collection of *Samples*).

Sample Collection Session: All of the sequential activities that directly involve the *Athlete* from the point that initial contact is made until the *Athlete* leaves the *Doping Control Station* after having provided his/her *Sample(s)*.

Test Distribution Plan: A document written by an *Anti-Doping Organization* that plans *Testing* on *Athletes* over whom it has *Testing Authority*, in accordance with the requirements of Article 4 of the International Standard for Testing and Investigations.

Testing Authority: The organization that has authorized a particular *Sample* collection, whether (1) an *Anti-Doping Organization* (for example, the International Olympic Committee or other *Major Event Organization, WADA, an International Federation, or a National Anti-Doping Organization*); or (2) another organization conducting *Testing* pursuant to the authority of and in accordance with the rules of the *Anti-Doping Organization* (for example, a National Federation that is a member of an International Federation).

10.3 Defined terms specific to the TDSSA

Minimum Level of Analysis (MLA): The number of analyses for the Prohibited Substances within the scope of the TDSSA required to be performed by an *ADO* for each sport/discipline, expressed as a percentage of the total eligible Tests in their TDP.

Physiological Risk Assessment: Analysis of the physiological demands of a sport or discipline against the potential performance enhancing benefit of *Prohibited Substances* on the TDSSA.

Risk Assessment: An all-inclusive assessment of risk (as described in the *International Standard for Testing and Investigations*) of a sport or discipline in relation to doping that considers a wide range of risk factors in addition to physiological risk. Such factors may include doping history, financial gain, gender, age, status of the sport within a country etc.

Test: Any combination of *Sample(s)* collected (and analyzed) from a single *Athlete* in a single *Sample Collection Session*.

Appendix 1

Minimum Levels of Analysis for Sports and Disciplines of Olympic and IOC Recognized International Federations, and members of the Alliance of Independent Recognized Members of Sport

SPORT	DISCIPLINE	ESAs %	GHs % ⁴	GHRFs % ⁴
Aikido	Aikido	5	5	5
Air Sports	All	0	0	0
American Football	American Football	5	10	10
Aquatics	Diving	0	5	5
Aquatics	Swimming Sprint 100m or less	10	10	10
Aquatics	Swimming Long Distance 800m or greater	30	5	5
Aquatics	Swimming Middle Distance 200-400m	15	5	5
Aquatics	Open Water	30	5	5
Aquatics	Synchronized Swimming	10	5	5
Aquatics	Water Polo	10	10	10
Archery	All	0	0	0
Athletics	Combined Events	15	15	15
Athletics	Jumps	10	15	15
Athletics	Long Distance 3000m or greater	60	5	5
Athletics	Middle Distance 800-1500m	30	10	10
Athletics	Sprint 400m or less	10	15	15
Athletics	Throws	5	15	15
Automobile Sports	All	5	0	0
Badminton	Badminton	10	10	10
Bandy	Bandy	5	10	10
Baseball	Baseball	5	10	10
Basketball	Basketball	10	10	10
Basketball	3 on 3	10	10	10
Basque Pelota	Basque Pelota	5	5	5
Biathlon	Biathlon	60	10	10
Billiards Sports	All	0	0	0
Bobsleigh	Bobsleigh	5	10	10
Bobsleigh	Skeleton	0	10	10
Bodybuilding	Bodybuilding	5	30	30
Bodybuilding	Fitness	10	30	30
Boules Sports	All	0	0	0
Bowling	All	0	0	0
Boxing	Boxing	15	10	10
Bridge	Bridge	0	0	0

⁴ Compliance with the GHRFs MLAs and GH MLAs will be mandatory from 1 January 2017 and 1 January 2018 respectively. In 2017 ADOs should maintain or preferably exceed their existing volume of GH analysis whilst putting in place the necessary measures to comply with the GH MLAs in 2018.

SPORT	DISCIPLINE	ESAs %	GHs % ⁴	GHRFs % ⁴
Canoe/Kayak	Sprint 200m	10	10	10
Canoe/Kayak	Canoe Slalom	15	10	10
Canoe/Kayak	Canoe Polo	5	10	10
Canoe/Kayak	Middle Distance 500m	15	10	10
Canoe/Kayak	Dragon Boat	10	5	5
Canoe/Kayak	Freestyle	5	10	10
Canoe/Kayak	Long Distance 1000m	30	5	5
Canoe/Kayak	Marathon	30	5	5
Canoe/Kayak	Ocean Racing	15	5	5
Canoe/Kayak	Wildwater	5	10	10
Casting	Casting	0	0	0
Cheer	Cheer	5	5	5
Chess	Chess	0	0	0
Cricket	All	5	10	10
Curling	Curling	0	0	0
Cycling	Artistic	5	5	5
Cycling	BMX	5	10	10
Cycling	Cycle-Ball	5	5	5
Cycling	Cyclo-Cross	30	10	10
Cycling	Mountain Bike	30	10	10
Cycling	Road	60	10	10
Cycling	Track Endurance	60	10	10
Cycling	Track Sprint	10	10	10
Cycling	Trials	5	5	5
Dance Sport	All	5	5	5
Darts	Darts	0	0	0
Dragon Boat	Dragon Boat	10	5	5
Draughts	Draughts	0	0	0
Equestrian	Dressage	0	0	0
Equestrian	Driving	0	0	0
Equestrian	Eventing	5	5	5
Equestrian	Endurance	5	5	5
Equestrian	Jumping	5	5	5
Equestrian	Reining	0	0	0
Equestrian	Vaulting	5	5	5
Fencing	Epee	5	5	5
Fencing	Foil	5	5	5
Fencing	Sabre	5	5	5
Field Hockey	Field Hockey	10	10	10
Field Hockey	Indoor	5	5	5
Fistball	Fistball	5	5	5

SPORT	DISCIPLINE	ESAs %	GHs % ⁴	GHRFs % ⁴
Floorball	Floorball	5	5	5
Flying Disc	Ultimate	5	5	5
Football	Beach Football	5	5	5
Football	Football	10	10	10
Football	Futsal	5	5	5
Go	Go	0	0	0
Golf	Golf	5	5	5
Gymnastics	Artistic	10	10	10
Gymnastics	Acrobatic	5	10	10
Gymnastics	Rhythmic	5	5	5
Gymnastics	Aerobic	10	5	5
Gymnastics	Trampoline	5	5	5
Gymnastics	Tumbling	5	5	5
Handball	Beach	5	5	5
Handball	Indoor	10	10	10
Ice Hockey	Ice Hockey	5	10	10
Icestocksport	Icestocksport Target	0	0	0
Icestocksport	Icestocksport Distance	0	5	5
Ju-Jitsu	All	10	10	10
Judo	Judo	10	10	10
Karate	Karate	10	10	10
Kendo	Kendo	5	5	5
Kickboxing	All	15	10	10
Korfball	Korfball	10	5	5
Lacrosse	Lacrosse	10	10	10
Life Saving	Ocean	10	5	5
Life Saving	Pool	10	5	5
Luge	Luge	0	10	10
Minigolf	Minigolf	0	0	0
Modern Pentathlon	Modern Pentathlon	5	5	5
Motorcycle Racing	All	5	0	0
Mountaineering and Climbing	All	10	5	5
Muaythai	Muaythai	15	10	10
Netball	Netball	10	5	5
Orienteering	All	15	5	5
Polo	All	5	5	5
Powerboating	Aquabike	5	5	5
Powerboating	Circuit	0	0	0
Powerboating	Offshore	0	0	0
Powerlifting	All	5	30	30
Racquetball	Racquetball	10	5	5
Roller Sports	Artistic	5	5	5
Roller Sports	Hockey	5	10	10

SPORT	DISCIPLINE	ESAs %	GHs % ⁴	GHRFs % ⁴
Roller Sports	Inline Speed Skating Sprint 1000m or less	15	10	10
Roller Sports	Inline Speed Skating Distance greater than 1000m	30	10	10
Rowing	Rowing	30	10	10
Rugby Union	Fifteens	10	10	10
Rugby Union	Sevens	10	10	10
Sailing	All	5	5	5
Sambo	Sambo	10	10	10
Savate	All	10	10	10
Sepaktakraw	All	0	0	0
Shooting	All	0	0	0
Skating	Figure Skating	10	10	10
Skating	Short Track	15	10	10
Skating	Speed Skating 1500m or less	15	10	10
Skating	Speed Skating greater than 1500m	30	10	10
Skating	Synchronized Skating	10	5	5
Skiing	Alpine	15	10	10
Skiing	Cross-Country	60	10	10
Skiing	Nordic Combined	30	10	10
Skiing	Freestyle	10	5	5
Skiing	Ski Jumping	0	5	5
Skiing	Snowboard	10	5	5
Ski Mountaineering	Ski Mountaineering	30	5	5
Sleddog	Sleddog	0	0	0
Soft Tennis	Soft Tennis	5	5	5
Softball	Softball	5	10	10
Sport Climbing	Boulder	10	10	10
Sport Climbing	Lead	10	5	5
Sport Climbing	Speed	10	5	5
Sport Fishing	Sport Fishing	0	0	0
Squash	Squash	10	5	5
Sumo	Sumo	10	10	10
Surfing	All	10	5	5
Table Tennis	Table Tennis	5	5	5
Taekwondo	Poomsae	5	5	5
Taekwondo	Sparring	10	10	10
Tennis	Tennis	10	5	5
Triathlon	All	60	10	10
Tug of War	Tug of War	5	10	10
Underwater Sports	Apnoea (all subdisciplines)	15	5	5
Underwater Sports	Aquathlon (Underwater Wrestling)	15	10	10
Underwater Sports	Finswimming Open Water	30	5	5
Underwater Sports	Finswimming Pool	15	5	5
Underwater Sports	Free Immersion	15	5	5

SPORT	DISCIPLINE	ESAs %	GHs %⁴	GHRFs %⁴
Underwater Sports	UW Orienteering	15	5	5
Underwater Sports	Spearfishing	15	5	5
Underwater Sports	Sport Diving	15	5	5
Underwater Sports	Target Shooting	0	0	0
Underwater Sports	UW Hockey	5	5	5
Underwater Sports	UW Rugby	5	5	5
Volleyball	Beach	5	5	5
Volleyball	Volleyball	5	5	5
Waterskiing	Barefoot	5	5	5
Waterskiing	Cable Wakeboard	5	5	5
Waterskiing	Cableski	5	5	5
Waterskiing	Racing Water Ski	5	5	5
Waterskiing	Tournament	5	5	5
Waterskiing	Wakeboard Boat	5	5	5
Weightlifting	Weightlifting	5	30	30
Wrestling	All	15	10	10
Wushu	Sanda	10	10	10
Wushu	Taolu	5	5	5

Appendix 2

Minimum Levels of Analysis for Sports and Disciplines of *Athletes* with an Impairment

IPC Sports

SPORTS	DISCIPLINE	ESAs %	GH % ⁶	GHRFs % ⁶
Para-Alpine Skiing	Para-Alpine Skiing	10	5	5
Para-Athletics	Combined Events	15	10	10
Para-Athletics	Jumps	5	10	10
Para-Athletics	Long Distance 3000m and greater	30	5	5
Para-Athletics	Middle Distance 800-1500m	30	5	5
Para-Athletics	Sprint 400m or less	5	10	10
Para-Athletics	Throws	5	10	10
Para-Biathlon	Para-Biathlon	30	10	10
Para-Cross Country Skiing	Middle/Long Distance	30	10	10
Para-Cross Country Skiing	Sprint/Short Distance	30	10	10
Para-DanceSport	Para-DanceSport	0	0	0
Para-Ice Hockey	Para-Ice Hockey	5	5	5
Para-Powerlifting	Para-Powerlifting	5	30	30
Para-Snowboard	Para-Snowboard	5	5	5
Para-Swimming	Sprint 100m or less	5	10	10
Para-Swimming	Middle Distance 200-400m	10	5	5
Para-Swimming	Long Distance 800m and greater	30	5	5
Shooting Para Sport	Shooting Para Sport	0	0	0

⁶ Compliance with the GHRFs MLAs and GH MLAs will be mandatory from 1 January 2017 and 1 January 2018 respectively. In 2017 *ADOs* should maintain or preferably exceed their existing volume of GH analysis whilst putting in place the necessary measures to comply with the GH MLAs in 2018.

Non-IPC sports

SPORTS	DISCIPLINE	ESAs %	GH % ⁶	GHRFs % ⁶
Archery	Para-Archery	0	0	0
Badminton	Para-Badminton	5	5	5
Basketball	Wheelchair Basketball	5	5	5
Bobsleigh	Para-Bobsleigh	5	5	5
Boccia	Para-Boccia	0	0	0
Canoe/Kayak	Para-Canoe Sprint	10	10	10
Curling	Wheelchair Curling	0	0	0
Cycling	Para-Cycling Road	30	5	5
Cycling	Para-Cycling Track Endurance	30	5	5
Cycling	Para-Cycling Track Sprint	5	5	5
Equestrian	Para-Equestrian	0	0	0
Fencing	Wheelchair Fencing	5	5	5
Field Hockey	Para-Field Hockey	5	5	5
Football 5-a-side	Para-Football 5-a-side	5	5	5
Football 7-a-side	Para-Football 7-a-side	5	5	5
Goalball	Goalball	5	5	5
Handball	Para-Handball	5	5	5
Judo	Para-Judo	10	10	10
Rowing	Para-Rowing	30	10	10
Rugby	Wheelchair Rugby	5	5	5
Sailing	Para-Sailing	0	0	0
Sitting Volleyball	Sitting Volleyball	5	5	5
Table Tennis	Para-Table Tennis	5	5	5
Taekwondo	Para-Taekwondo-Kyorugi	10	10	10
Tennis	Wheelchair Tennis	5	5	5
Triathlon	Para-Triathlon	30	10	10
Waterskiing	Disabled	0	0	0