SECTION 2:
ATHLETE NOTIFICATION

ISTI 5.1

Objective: The objective is to ensure that an *Athlete* who has been selected for *Testing* is properly notified with no advance notice of *Sample* collection as outlined in Articles 5.3.1 and 5.4.1, that the rights of the *Athlete* are maintained, that there are no opportunities to manipulate the *Sample* to be provided, and that the notification is documented.

The TA/SCA must establish a system for locating the selected athlete(s), planning the approach and timing of notification, and recording in detail athlete notification attempt(s) and outcome(s).

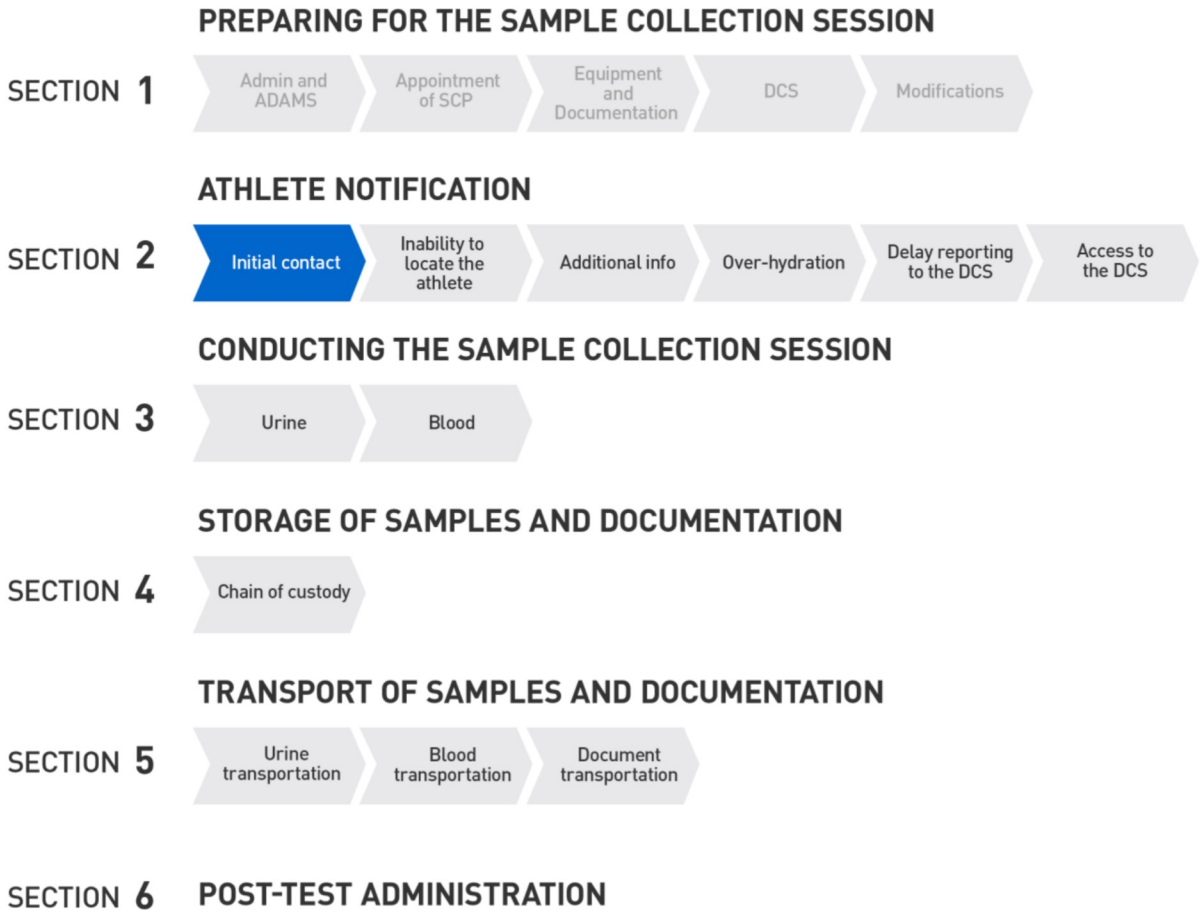
The TA/SCA must also provide official documentation to SCP validating their authority to collect a sample from the athlete, e.g., an authorization letter from the TA. This is in addition to any complementary ID the DCO will carry with them e.g., SCA ID card, health card, etc. It is also recommended that BCOs carry (or have access to) their qualifications ID issued by the relevant authorities, e.g., association of phlebotomists, medical card, etc.

TIP

TA/SCA should consider issuing an accreditation card to confirm that the SCP have been trained and are accredited to collect samples on behalf of that SCA or TA.

For detailed guidance for SCP on the notification refer to WADA's *Template DCO Manual Section 5*.

Chapter 6
Initial contact with the athlete



1. No advance notice testing

No advance notice testing must be the method for sample collection save in exceptional and justifiable circumstances. Such circumstances where the TA/SCA should ensure a solution or process is available, include:

- where a modification for a minor athlete or athlete with an impairment is required; or

- testing locations with high security access, e.g., military bases, hotels etc.

To ensure that testing is conducted on a no advance notice testing basis, the TA/SCA must ensure that athlete selection decisions are only disclosed in advance of testing to those who strictly need to know in order for such testing to be conducted.

The TA/SCA must determine if a third party is required for notification prior to notification of the athlete when the athlete is a minor or where required by an athlete's impairment, or in situations where an interpreter is required.

There should be no disclosure of the selection decisions and/or policies to a national federation, team representative or an event organizer.

The TA/SCA has to agree in advance about the role and responsibility of the IF representative at an event, in particular, that the person is there to only assist when needed, and that they are aware of their responsibility to stay with the SCP team until the notification of the athlete(s). The IF representative (or the TA if no IF representative is present) will need to educate the SCP on how the sport operates prior to or on the first day of the event. Areas covered should include as a minimum:

- the preferred access to the "field of play";
- where the SCP can observe athletes from during competition;
- the appropriate location to notify athletes;
- post-match/event activities and commitments; and
- athletes who may participate more than once within the day (e.g., multiple events, heats or repechages).

Educating the SCP is important so they understand the sport and are able to notify the athlete without disrupting their performance or post competition commitments.

2. Criteria to validate an athlete's identity

The TA or SCA must establish criteria to validate the identity of an athlete selected to provide a sample. This ensures the selected athlete is the athlete who is notified and provides the sample. If the athlete's identity is not able to be validated at notification, a third party may be asked to identify the athlete. However, an athlete's inability to provide photo ID does not invalidate a test.

Formal ID can be established by an official ID document that includes a unique number and photograph of the athlete (e.g., passport, driving licence, accreditation with a photo, etc.). The ID process can be initiated by other means e.g., starting number or finishing position but should be verified with the provision of formal ID by the athlete. The SCP knowing the athlete is not considered a sufficient method of athlete identification and therefore, is not recommended.

It is the responsibility of the athlete to produce ID in accordance with the criteria set by the TA. If the athlete cannot provide such ID, a third party may be asked to identify the athlete and the details of such identification (and the third party details) should be documented on the Doping Control Form or a

Supplementary Report Form. If possible, the third party who will assist with the identification of the athlete should be free of any conflict of interest. If this is not possible, the athlete representative can be used as third party confirming the athlete's identity (although this should be avoided).

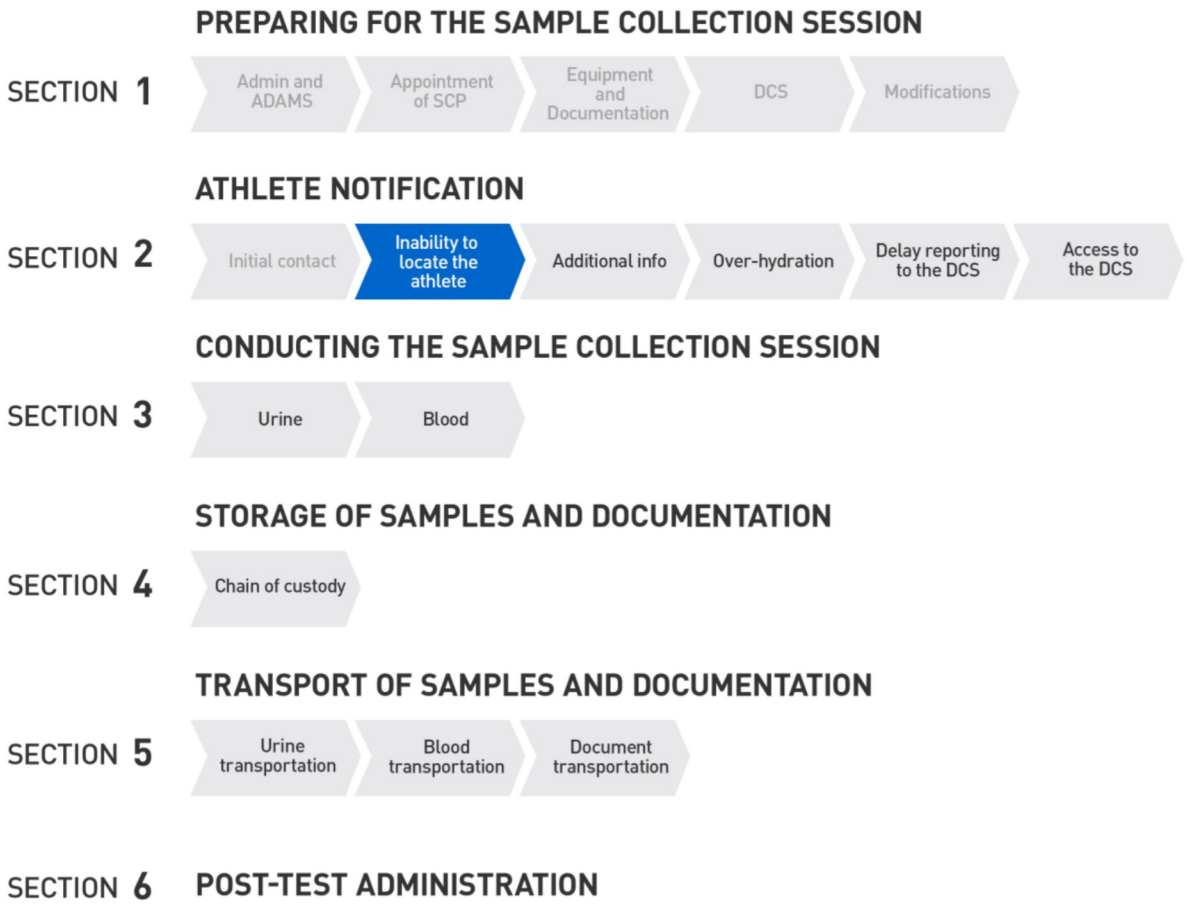
If the athlete's identity can't be validated but the SCP through other means (e.g., finishing position) believes it is the correct athlete, the DCO must document this and report it to the TA/SCA. In this scenario, it is recommended to take a photo of the athlete (with the athlete's consent) at the time of the notification and at the end of the sample collection session. If the SCP suspects that the athlete notified has been switched (i.e., an impersonator or doppelganger), the SCP should continue with the sample collection but report the circumstances and obtain any evidence they can retrieve to support their suspicion.

TIP

WADA's paperless system (DCO Central) will have the functionality to take and store photographs of the athlete for the purpose of identifying an athlete.

The TA/SCA can consider a possible Failure to Comply if the athlete refuses to provide formal ID and must investigate if SCP report serious breaches in athlete identity fraud or switching. WADA's Intelligence and Investigation department can offer support in these situations.

Chapter 7
Inability to locate the athlete



The TA or SCA should provide the SCP with sufficient instructions to locate an athlete. If a selected athlete is not located based on the whereabouts information provided, the SCP should attempt to locate the athlete by any other means, based on the nature of the location and other people in the vicinity, with no advance notice.

If the attempt is made within the athlete's 60-minute time slot, the SCP must make all reasonable attempts to locate the athlete with no advance notice. Examples of reasonable attempts include:

- If the attempt takes place at the athlete's residence, the SCP should ring the doorbell or knock upon arrival and then at regular intervals during their attempt. While waiting, the SCP should stay

somewhere close-by, where they are able to observe access in and out of the residence and monitor any activity inside the residence e.g., lights switched on or off or people moving around the residence. At the end of the 60-minute time slot one last attempt should be made.

- If the attempt takes place at a residential address or location with gated or security access, the TA/SCA should ensure that through the whereabouts provided by the athlete that specific information is available on how the SCP will reach the athlete. This might include an access code to a security gate or specific instructions on how to access a building with security personnel in attendance.

- If the attempt takes place at a sporting venue or other training location and the athletes can't initially be located, the SCP should check other areas to try and locate the athlete. This could include, treatment rooms, meeting rooms, gym, changing rooms etc. The TA/SCA should ensure that the athlete is providing precise location information especially in large venues as part of their whereabouts filings. A failure by an athlete to provide accurate whereabouts information may result in a potential Filing Failure or if relative to testing during the athlete's 60-minute time slot a Missed Test.

For detailed guidance for SCP on making reasonable attempts refer to WADA's *Template DCO Manual Section 4.3*.

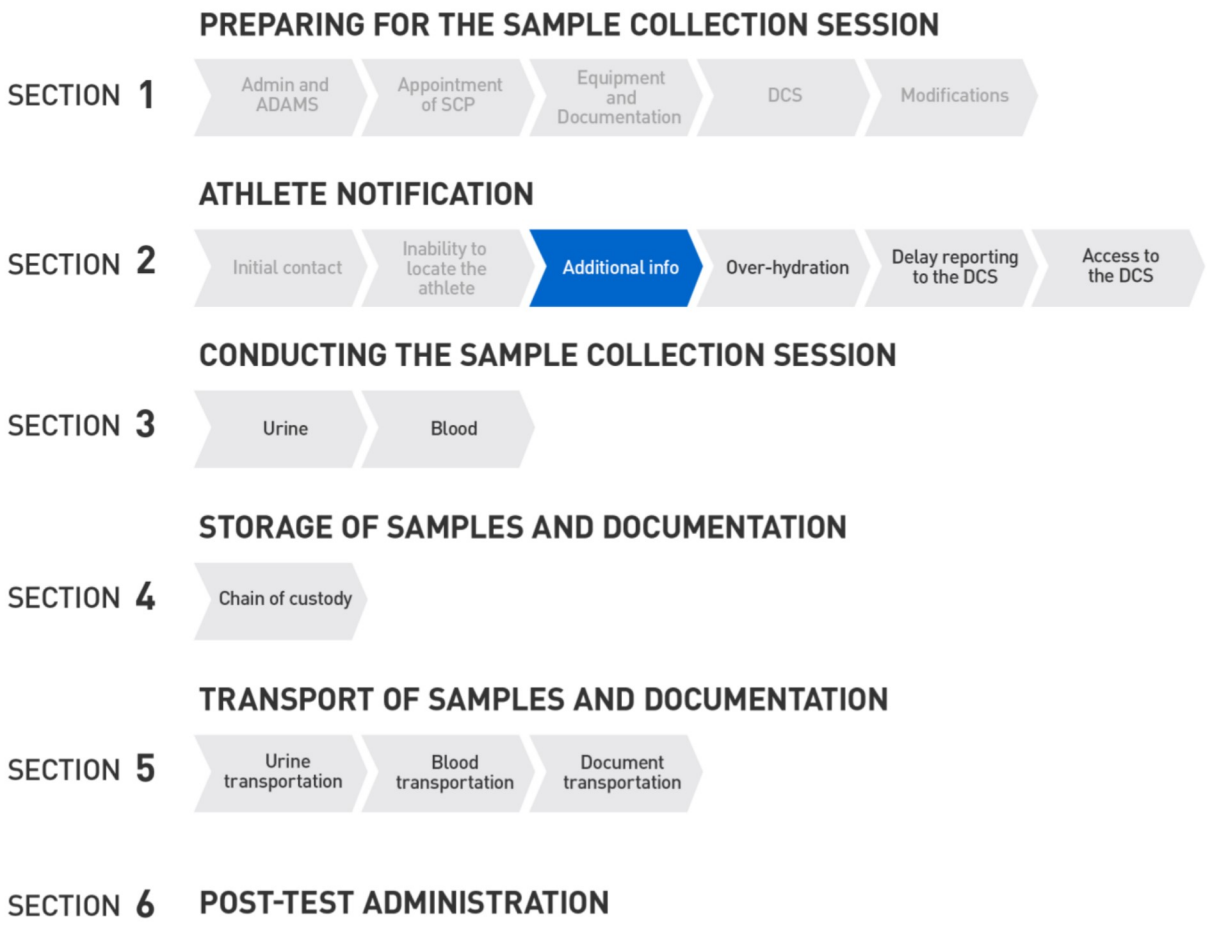
The TA/SCA must also provide instructions on whether a telephone call to the athlete 5-minutes before the end of the 60-minute time slot by the SCP is acceptable. It is recommended that such strategy only be used in exceptional circumstances and only if the athlete cannot be located by exhausting all other means. The TA/SCA should also provide instructions to the SCP on how to proceed when or if the athlete responds to the telephone call. This should include whether to leave a voice message, call again, send a follow up text message, what to do if the athlete is close-by, and how to proceed if a third-party is contacted.

The frequency of these telephone calls by SCP and the apparent reliance on them by athletes to be located for a test should be monitored by the TA/SCA for intelligence purposes and target testing.

Note: the use of a telephone call in the last 5 minutes of an athlete's 60-minute time slot is not mandatory. TAs should educate athletes on the purpose of the telephone call. For more guidance on the use of the telephone call refer to WADA's *Template DCO Manual section 4.3*.

If the attempt is made outside the athlete's 60-minute time slot, SCP should again make all reasonable attempts to locate the athlete with no advance notice. If this is not possible, the TA/SCA should provide instructions to the SCP on how to proceed.

Chapter 8
Additional information about the sample collection



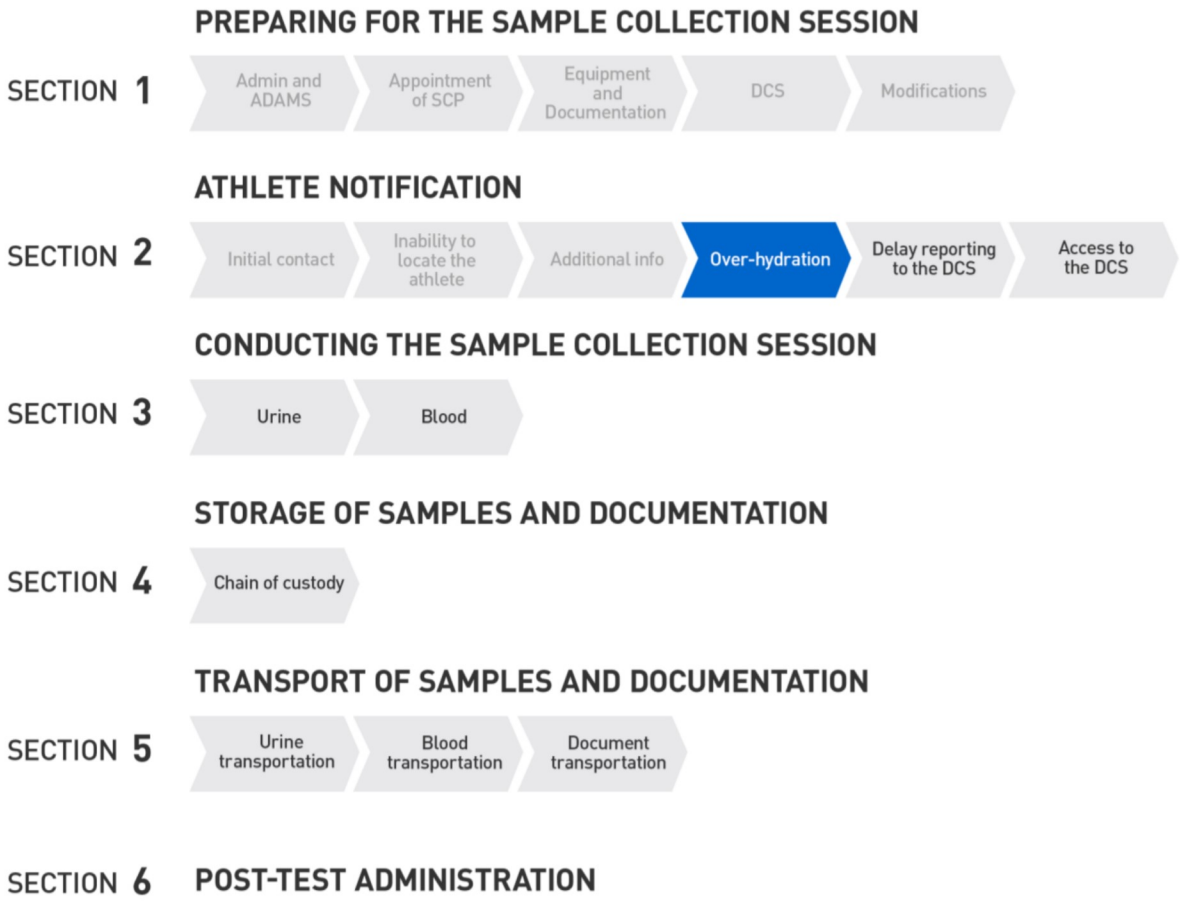
When notified, the athlete has the right to ask for additional information about the sample collection process. For example:

- the athlete might ask information on the types of sample requested;
- the required volume of a sample;
- the sample collection equipment; or

- the time it will take for the results of the test to be available.

The SCP who is chaperoning the athlete should be trained sufficiently to provide responses to the athlete regarding their requests for additional information, however, if this is not the case, the SCP should refer the athlete to another, more senior and experienced DCO once the athlete enters the DCS.

Chapter 9
Over-hydration

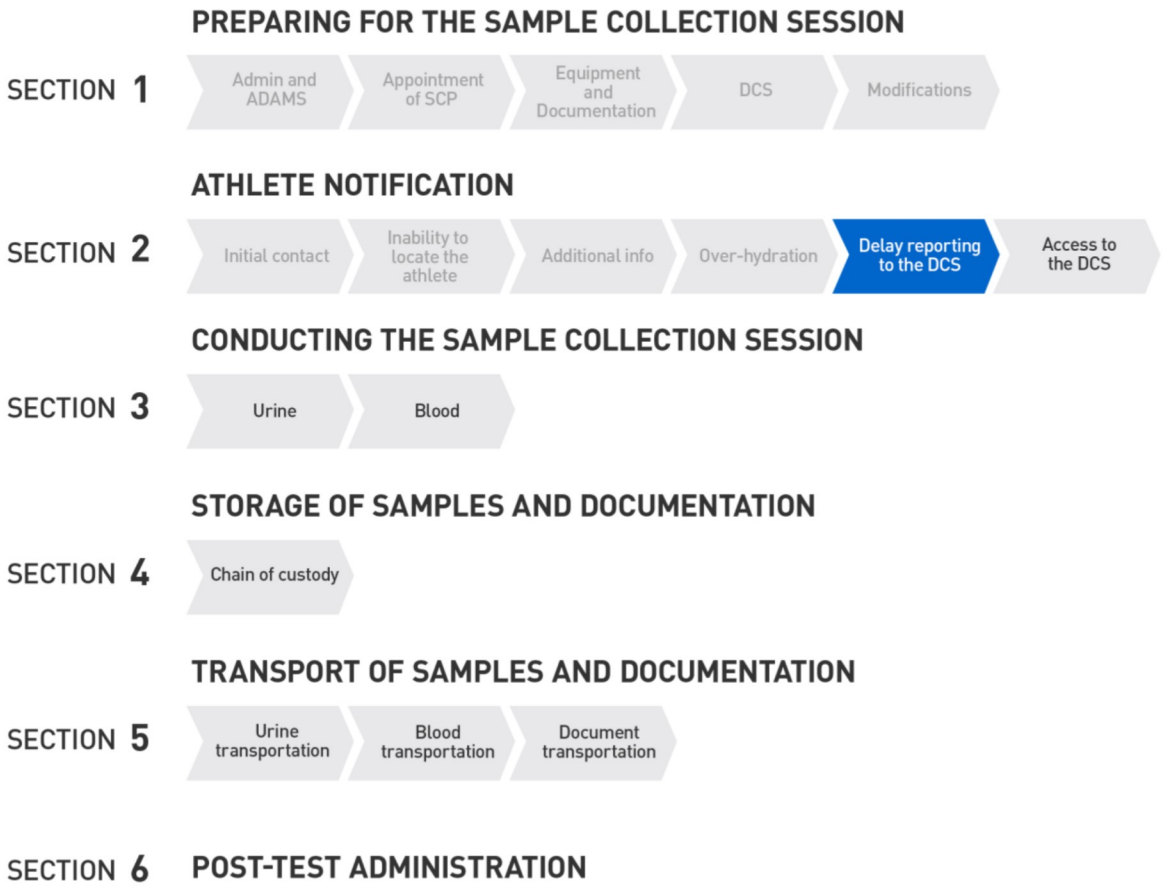


After being notified of their selection for a test, the athlete must be informed not to over-hydrate, since this may delay the production of a suitable sample for analysis due to the sample being too dilute. There are many factors that can affect the dilution of a urine sample, for example:

- the intensity and duration of a competition or training activity;
- the weather conditions and in particular the temperature;
- the way an athlete consumes fluids during the competition/training i.e., how frequently they hydrate during their activity; and
- an individual's metabolism.

As a guide, the consumption of 1-1.5 L of fluids after notification is not considered over-hydrating.

Chapter 10
A request to delay reporting to the DCS



The athlete has the right to request a delay in reporting to the DCS or to leave the DCS, if they haven't completed the sample collection session.

ISTI Article 5.4.4 outlines a list of reasons (whether in-competition or out-of-competition) that are acceptable for the athlete to either delay reporting to, or temporarily departing from the DCS. However, it also refers to any other reasonable circumstances, as determined by the DCO, taking into account any instructions of the TA/SCA. As a result, the TA/SCA should provide instructions to the SCP on the requirements and the protocols of the sport or the specific situation. For example, a suitable reason could be to obtain warm clothing post competition if the event takes place outdoors during cold weather. Taking a shower should not be a reasonable request to delay or temporarily depart unless required for health and safety reasons,

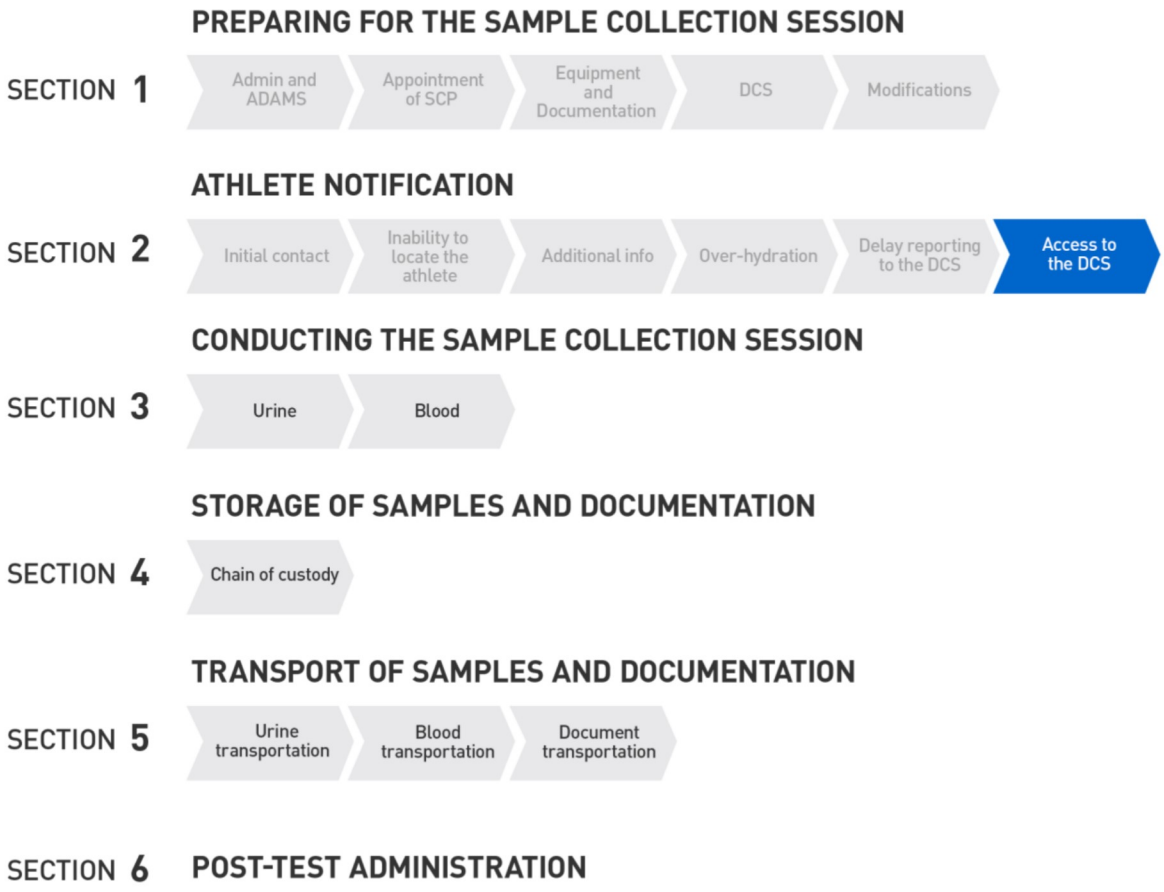
for example, open water swimming in a lake with algae or if the athlete is selected for blood testing only. The final decision to permit the athlete a reasonable request to delay or temporarily depart the DCS lies with the DCO (and based on the instructions provided by the TA) and must be accepted only if the athlete can be chaperoned and kept under direct supervision by the SCP at all times. So, if a shower has been approved by the DCO, the SCP will be required to observe the athlete taking a shower.

The TA/SCA is also responsible for establishing guidelines for what constitutes suspicious athlete behavior that should be reported by SCP. A non-exhaustive list could include:

- evading observation or urinating in a shower;
- evading being appropriately observed during urine sample collection;
- ingesting an unidentified substance;
- where another athlete appears for testing who is not the correct athlete (athlete switching/impersonator);
- substitution or manipulation of a sample;
- making a distressed call to a coach; or
- any other unusual behavior.

For detailed guidance for SCP on examples of potential suspicious behavior by athletes refer to WADA's *Template DCO Manual Section 9*.

Chapter 11
Access to the DCS



ISTI Article 6.3.3 outlines the criteria for those persons that must be authorized to be permitted to enter the DCS or be present during the sample collection session in addition to SCP. This must include at a minimum:

- an athlete's representative and/or interpreter;
- a WADA-appointed observer or a WADA auditor; and
- an authorized person who is involved in the training of SCP or auditing the SCA.

In case the TA authorizes any other individuals to be present in the DCS such as an IF representative, they should inform the SCP in advance of the mission. Other permitted individuals should be free of any conflict

of interest and should be there to assist with the sample collection session following the instructions of the SCP. The duration and the name of such individuals in the DCS should be recorded by the SCP.

The TA/SCA must also establish criteria regarding what items may be prohibited within the DCS. For example, the provision of alcohol or its consumption is not permitted within the DCS (see ISTI 7.3.4), nor should the athlete consume alcohol prior to providing a sample (more guidance is provided in the DCO Manual, Section 4.4), the use of telephones (by all, including SCP) should be discretionary and video calls or recordings should be prohibited.

The TA/SCA should consider establishing an Entry/Exit system to control access to the DCS. Such system should monitor the flow of athletes, their support personnel and other individuals authorized to enter the DCS. It is recommended that the SCP, IF representative and WADA-appointed observer are not registered in such system due to the frequency of their movements in and out of the DCS.

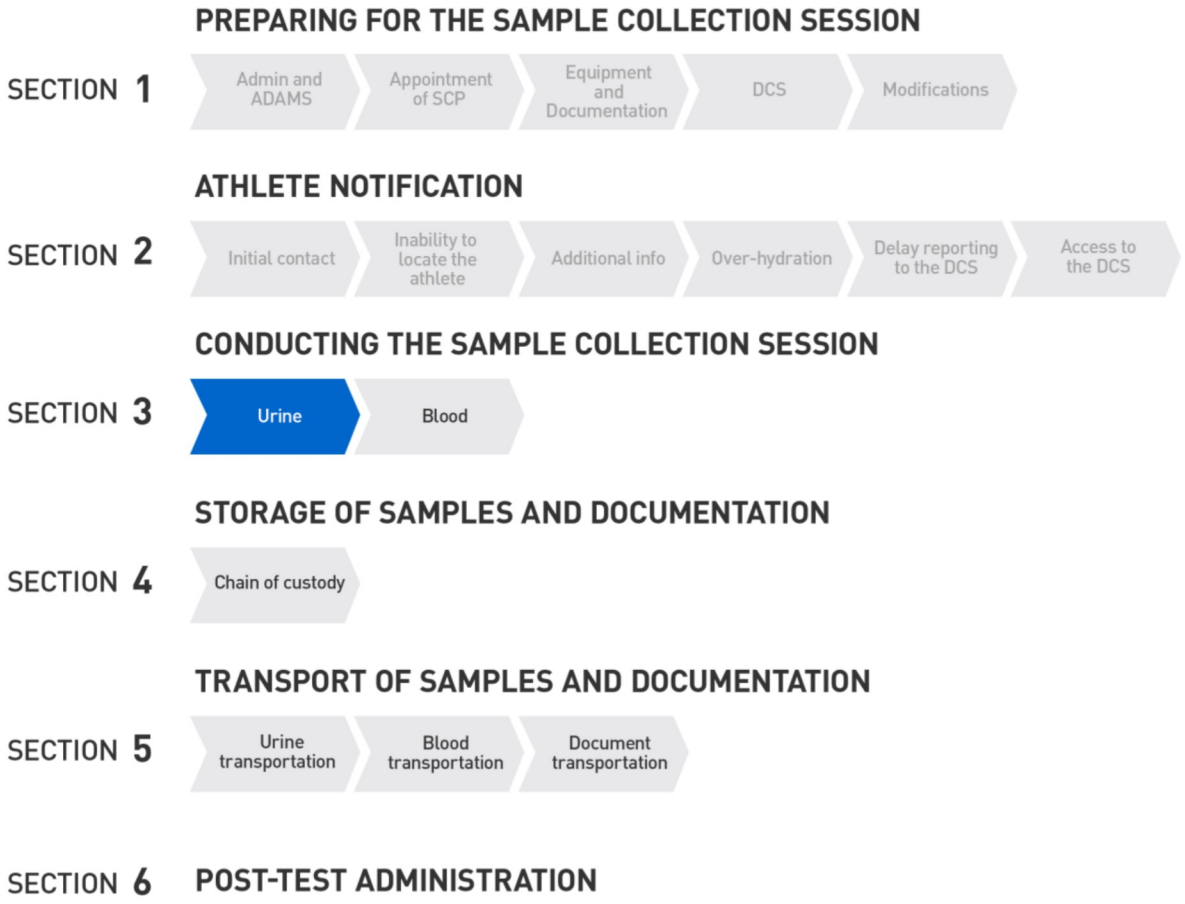
SECTION 3:
CONDUCTING THE SAMPLE COLLECTION SESSION

ISTI 7.1

Objective: To conduct the *Sample* Collection Session in a manner that ensures the integrity, identity and security of the *Sample* and respects the privacy and dignity of the *Athlete*.

This guideline only outlines the areas that the TA/SCA needs to establish criteria to assist SCP with the sample collection session as required by the ISTI. Such information should be provided to the SCP in advance of the sample collection session.

Chapter 12
Urine sample collection



ISTI C.1

Objective:

To collect an *Athlete*'s urine *Sample* in a manner that ensures:

a) Consistency with relevant principles of internationally recognized standard precautions in healthcare settings so that the health and safety of the *Athlete* and *Sample* Collection Personnel are not compromised;
b) The *Sample* meets the Suitable Specific Gravity for Analysis and the Suitable Volume of Urine for Analysis. Failure of a *Sample* to meet these requirements in no way invalidates the suitability of the *Sample* for analysis. The determination of a *Sample*'s suitability for analysis is the decision of the relevant Laboratory, in consultation with the *Testing* Authority for the *Sample* Collection Session in question;

[Comment to C.1.(b): The measurements taken in the field for Suitable Specific Gravity for Analysis and the Suitable Volume of Urine for Analysis are preliminary in nature, to assess whether the Sample meets the requirements for analysis. It is possible there could be discrepancies between the field readings and the final Laboratory readings due to the precision of the Laboratory equipment. The Laboratory reading will be considered final, and such discrepancies (if any) shall not constitute a basis for Athletes to seek to invalidate or otherwise challenge an Adverse Analytical Finding.]

c) the *Sample* has not been manipulated, substituted, contaminated or otherwise tampered with in anyway;
d) the *Sample* is clearly and accurately identified; and
e) the *Sample* is securely sealed in a Tamper Evident kit.

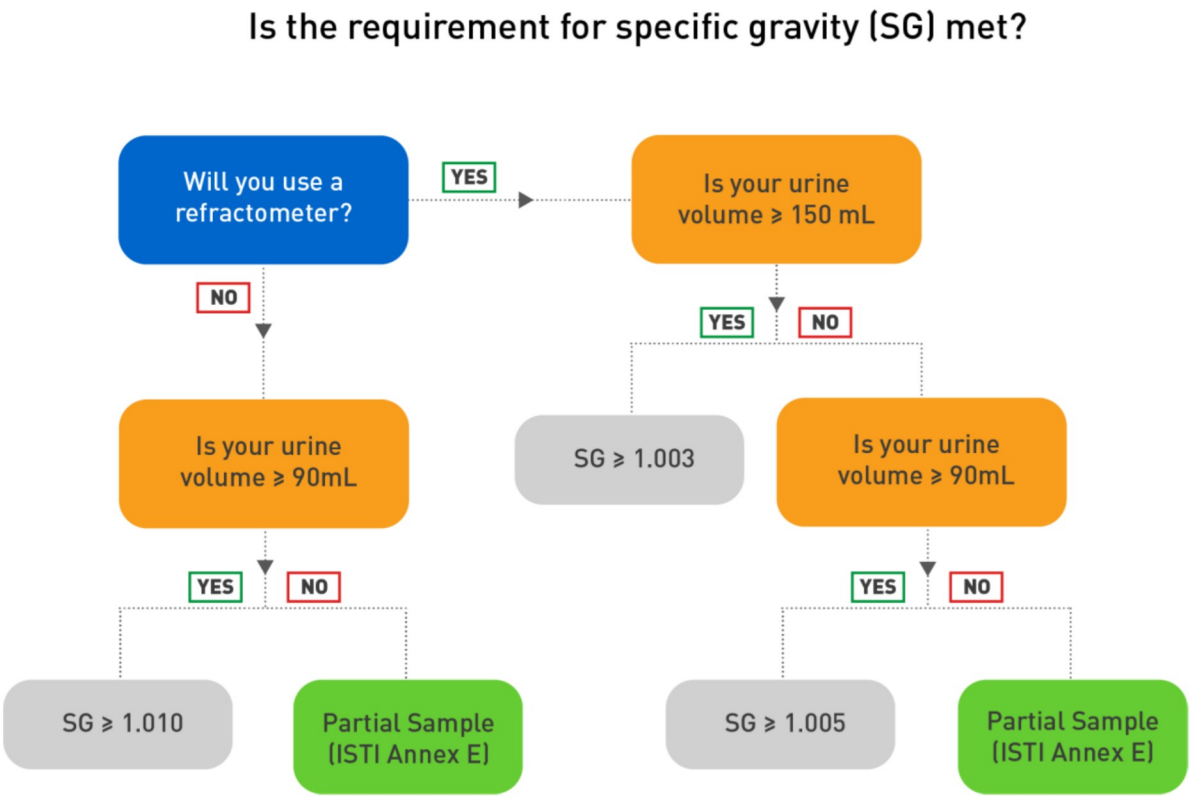
For detailed guidance for SCP on the procedures for the collection of urine samples refer to WADA's *Template DCO Manual Section 6.1*.

1. Suitable Specific Gravity for Analysis

The requirement for accepting a sample with a suitable specific gravity for analysis is either:

- a sample with a minimum volume of 90mL and less than 150mL, with a specific gravity of 1.005 or higher with a refractometer, or 1.010 or higher with lab sticks; or
- a sample with a volume of at least 150mL, with a specific gravity of 1.003 or higher with a refractometer only.

The diagram below outlines the steps to be followed when measuring the volume and specific gravity of a urine sample.



According to the requirements contained in the ISTI:

- the DCO must continue to collect additional samples until the requirement for suitable specific gravity for analysis is met[3]; or
- until the DCO determines that there are exceptional circumstances which mean it is impossible to continue with the sample collection session.

Any exceptional circumstances must be documented accordingly by the DCO.

For the DCO to determine whether exceptional circumstances exist, the TA may specify procedures to be followed by the DCO. Such exceptional circumstances may include, but are not limited to:

- the closure of a venue or location where the testing is taking place and no alternative location can be found nearby to continue sample collection;

[3] *Note that it is not acceptable for the TA/SCA to have a starting maximum number of samples that will be collected irrespective of whether the requirement for suitable specific gravity is met (i.e., two samples maximum even if the second sample does not meet the requirements for suitable specific gravity).*

- evacuation of all persons from a venue or location due to an emergency situation;
- all sample collection equipment has been used or not deemed suitable by the DCO;
- SCP or the athlete having to leave the venue to attend a hospital for medical treatment or attend to an emergency situation of an immediate family member; and/or
- athlete has provided a number of dilute samples, it is late in the evening and the athlete is due to compete early the next day.

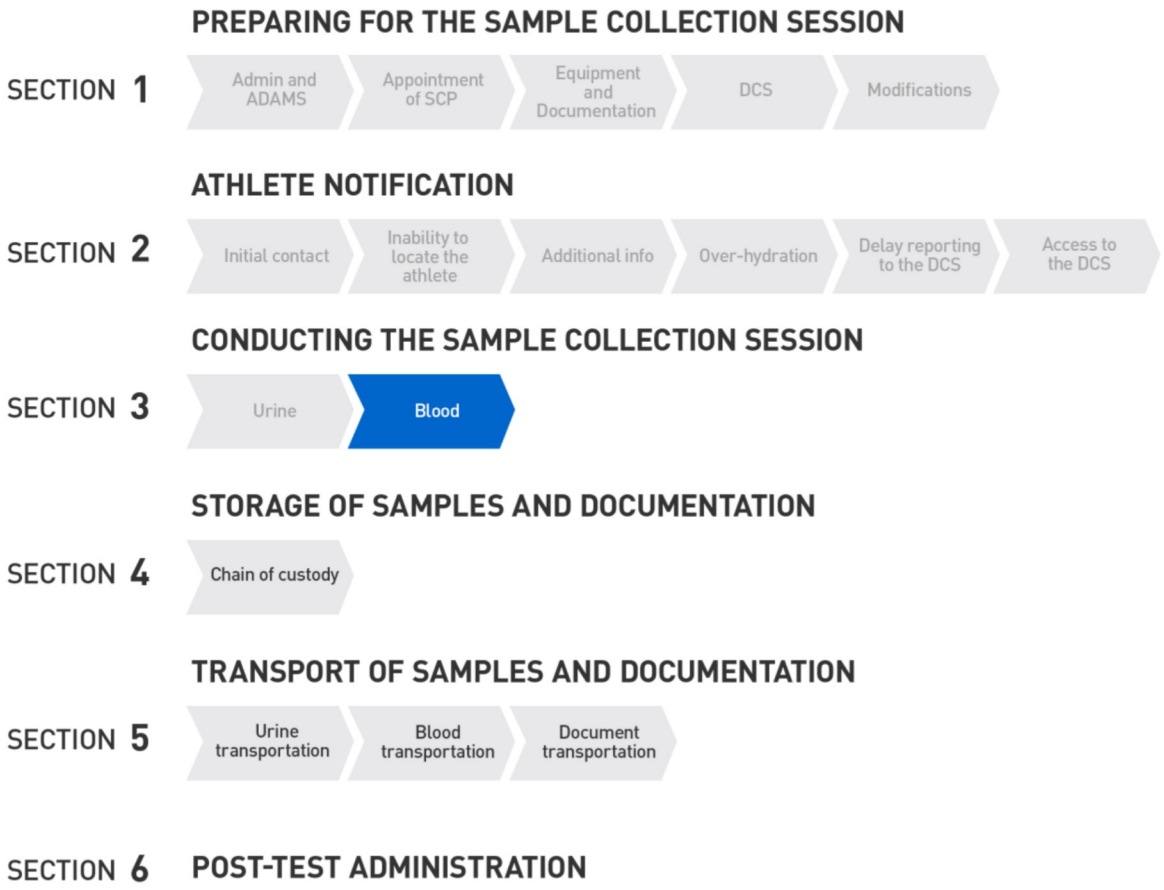
The TA should consider target testing athletes as soon as possible when sample collection sessions have not been completed due to exceptional circumstances listed above. For scenarios not listed above and included in a TA's list of exceptional circumstances, the TA should provide SCP with a contact person who can make the decision to grant an exceptional request to end the sample collection session for an athlete.

2. Analysis of multiple samples

When two samples are collected from an athlete, during the same sample collection session, both samples must be analyzed by the Laboratory. In cases where three or more samples are collected during the same sample collection session, the Laboratory must prioritize and analyze the first and the subsequent collected sample with the highest specific gravity, as recorded on the Doping Control Form.

The TA, in conjunction with the Laboratory, may determine if the other samples need to be analyzed. The TA should consistently monitor the provision of dilute samples by athletes to identify any trends or suspicious behavior. If suspicious behavior is identified, the TA should consider alternative testing strategies, including analyzing all urine samples provided.

Chapter 13
Blood sample collection



1. Venous blood

ISTI D.1

Objective: To collect an *Athlete*'s blood *Sample* by venipuncture in a manner that ensures:

a) Consistency with relevant principles of internationally recognized standard precautions in healthcare settings, and is collected by a suitably qualified Person, so that the health and safety of the *Athlete* and *Sample* Collection Personnel are not compromised;

b) The *Sample* is of a quality and quantity that meets the relevant analytical guidelines and requirements defined by the Laboratory;

c) The *Sample* has not been manipulated, substituted, contaminated or otherwise tampered with in anyway;

d) The *Sample* is clearly and accurately identified; and

e) The *Sample* is securely sealed in a Tamper Evident kit.

ISTI I.1.

Objective: To collect an *Athlete*'s blood *Sample* by venipuncture, intended for use in connection with the measurement of individual *Athlete* blood variables within the framework of the hematological module of the *Athlete Biological Passport* program, in a manner appropriate for such use. The requirements of this Annex are additional requirements to those contained in Annex D – Collection of Venous Blood *Samples*.

For detailed guidance for SCP on the procedures for the collection of blood samples refer to WADA's *Template DCO Manual Section 6.2*.

When planning a venous blood test, the TA/SCA needs to consider the type of analysis that will be conducted by the Laboratory and what blood collection tubes are required for sample collection. The following Prohibited Substances can be analyzed in blood:

- Erythropoietin receptor agonists (ERAs);
- Growth Hormone (GH) analysis using either the Isoforms or the Biomarkers method;
- The hematological module of the Athlete Biological Passport (ABP);
- Blood Transfusions (BT);
- Hemoglobin-based oxygen carriers (HBOCs); and

- Steroid esters.

Other Prohibited Substances which can also be analyzed in a blood sample (serum/plasma) but which may have limited availability at some Laboratories includes the following non-exhaustive list:

- Xenon;
- Insulin analogues;
- Desmopressin; and
- Insulin Growth Factors (IGF-1) analogues.

TAs/SCAs are advised to contact their Laboratory regarding the availability of other analysis types in advance of their collection.

When planning and conducting a sample collection session, the TA/SCA may want to collect a sufficient volume of blood or an additional urine sample to enable multiple types of analyses to be conducted simultaneously. For example, an ABP test may reveal abnormal variables that warrant immediate analysis of a urine and/or blood sample for Prohibited Substances or Methods. Also, should an Adverse Analytical Finding (AAF) be returned for a Prohibited Substance (e.g., ERAs) that was analyzed using a blood ABP sample, a B sample analysis could be requested. It is therefore strongly recommended to collect two tubes of blood when collecting blood ABP samples.

Conducting multiple types of blood analyses requires careful consideration regarding the equipment needed. The below table offers TAs/SCAs guidance on integrating multiple types of blood testing and the equipment required.

Test	Analysis matrix	Tubes#	V / tube (mL)	No. of tubes	Tube inversion
GH Isoforms GH biomarkers – endocrine module of the ABP / HBOCs / blood steroid modules of the ABP / steroid esters / ERAs / /TGFβ signalling inhibitors	Serum	BD Vacutainer® SST II Plus (EU ref 367955) or BD Vacutainer™ SST II Plus Advance tubes (EU ref 367954) or BD Vacutainer® SST™ tubes, US ref 367986	5	2	At least 3

Hematological module of the ABP [4] / BT [4] / Gene Doping [5]	Whole Blood	BD Vacutainer® EDTA (CE #368856, US #367856, AUS #367839)	3 - 4	1[6] - 2	At least 3
HBOCs [4, 5] / steroid esters [4, 5] / ERAs [4, 5] / TGFβ signalling inhibitors [4, 5]	Plasma	BD Vacutainer® EDTA (CE #368856, US #367856)	3 - 4	2	At least 3
Steroid esters	Serum / Plasma	Tubes containing esterase inhibitor NaF, with or without EDTA, with or without gel separator. Examples: BD Vacutainer® #367729, #367587 Kima #13808	2 - 7	2	At least 3

Note: All venous blood samples should be refrigerated as soon as possible after withdrawal.

[4] Since the analyses of the haematological Markers of the ABP and BT are performed on the blood cellular fraction, whole non-coagulated blood collected in K_2EDTA tubes is required. For HBOCs/steroid esters/ERAs/TGFβ signalling inhibitors testing, analysis is done on the separated plasma fraction, which is obtained after centrifugation of the whole-blood Sample (e.g., on Ficoll gradient). These tests may be conducted on blood Samples specifically collected for that purpose or using the same blood Sample collected for ABP and/or BT analyses; however, in the latter cases the separation of the plasma fraction to conduct these tests shall be done only after the ABP and/or BT analyses have been concluded.

[5] For Gene Doping testing, whole non-coagulated blood collected in K_2EDTA tubes is required. However, to avoid any potential cross-contamination, blood Samples collected for the analysis of the haematological Markers of the of ABP shall not be used for the application of the Gene Doping test. For Gene Doping testing, separate blood Samples shall be collected. However, once the Gene Doping Test using whole blood is concluded, the plasma fraction may be obtained for the conduct of other analyses (e.g., HBOCs/steroid esters/ERAs/TGFβ signalling inhibitors).

[6] Only one tube is necessary for the collection of an ABP Sample; however, it is recommended to collect two (2) tubes (A & B Samples), if other tests (e.g. HBOCs/steroid esters/ERAs/TGFβ signalling inhibitors) or further analysis is planned.

2. Capillary blood (i.e., dried blood spot (DBS)

ISTI J.1

Objective: To collect an *Athlete*'s blood as a dried blood spot *Sample* in a manner that ensures:

a) Consistency with relevant principles of internationally recognized standard precautions in healthcare settings, and is collected by a suitably qualified *Person*, so that the health and safety of the *Athlete* and *Sample* Collection Personnel are not compromised;

b) The *Sample* is of a quality and quantity that meets the relevant analytical requirements;

c) The *Sample* has not been manipulated, substituted, contaminated or otherwise tampered with in anyway;

d) The *Sample* is clearly and accurately identified; and

e) The *Sample* is securely sealed in a Tamper Evident kit.

For detailed guidance for SCP on the procedures for the collection of DBS samples refer to WADA's *Template DCO Manual Section 6.2.4*.

Planning for Analysis

When planning a DBS test, the TA/SCA needs to consider the type of analysis that will be conducted by the Laboratory and the volume required.

The analysis of DBS samples is performed in WADA-accredited Laboratories. However, as it is currently not mandatory for all WADA-accredited Laboratories to conduct analysis of DBS samples, the TAs/SCAs are advised to contact the WADA-accredited Laboratories regarding the availability of analyses in advance of the collection.

The current scope of DBS testing covers the detection of Non-Threshold Substances with no Minimum Reporting Levels (MRL) only.

The volume of capillary blood removed must be adequate to satisfy the relevant analytical requirements for the sample analysis to be performed. In principle, a minimum total of approximately 40 µL of capillary blood in the "A" spot(s) and a minimum total of approximately 20 µL of capillary blood in the "B" spot(s) is sufficient for chromatography-mass spectrometric Analytical Methods. These volumes are the minimum volumes required and it is recommended to collect a total of approximately 60 µL of capillary blood in the "A" spot(s) and a total of approximately 40 µL of capillary blood in the "B" spot(s) when possible. Other special analyses

or additional analyses by chromatography-mass spectrometry may require additional samples and/or increased sample volume. If the volume collected isn't sufficient to cover the analyses requested by the TA, the Laboratory will ask the TA to prioritize them.

While with some DBS sample collection devices, the volume of capillary blood collected is known, when DBS samples are collected by finger-pricking and the drop of blood is directly applied onto the cellulose card, the exact volume deposited is not known. Typically, a spot volume of 20 – 70 µL is generated if free falling drops of capillary blood are collected, while the volume collected is 15 – 50 µL if a hanging drop is directly brought into contact with the cellulose card.

Sites of Puncture

Depending on the sample collection equipment used by the SCA, two sites of puncture may be used for the collection of DBS samples:

1) Cellulose-based cards (or alternative material/absorbent sample support), used in conjunction with lancets, are used to collect the DBS samples from the fingertip.

2) Devices with integrated microneedle(s)/microlancet(s) are used to collect the DBS samples from the upper arm.

If more than one attempt is needed to collect a sufficient volume of capillary blood, the DCO/BCO must select another site of puncture for the second and/or third attempt. That other site of puncture may be on the same finger or upper arm, or on a different one.

Alternative suitable sites of puncture, such as earlobes or the abdomen, may be used for athletes with physical impairments, if needed. However, it is recommended to contact the equipment manufacturers for information on the performance of the available devices on alternative puncture sites. These alternative sites of puncture are not recommended for athletes without physical impairments, unless strictly required because of circumstances such as injuries or if the skin on the hands or arms does not permit the collection of a sample for the fingertip and/or the upper arm (for example because of scar tissues or recent tattoos, i.e., within the last six months). The use of an alternative site of puncture must be documented by the DCO.

To increase the blood flow and for a successful collection, the DCO/BCO must instruct the athletes to warm the site of collection. Different techniques can be used, such as washing the hands in warm water, shaking the hand/arm, massaging the puncture site, or placing the hand/arm in a warm blanket or equivalent. The period needed for the warming of the puncture site will vary depending on the environmental conditions (e.g., temperature), but it is recommended to continue until the site of puncture is warm to the touch.

Requirements for DBS sample collection equipment

In addition to the mandatory requirements for the DBS sample collection equipment listed in the ISTI, the DBS sample collection equipment should also meet the following criteria:

- The absorbent sample support should be made of untreated cellulose paper or alternative absorbent material (e.g., synthetic polymer). ADOs should always consult with the laboratories before choosing the type of absorbent sample support to use;

  [Comment: If specific absorbent sample supports have been indicated in an applicable WADA International Standard, TD or Guidelines, then the use of an alternative sample support shall be

validated with the involvement of the relevant Laboratory(ies) and approved by WADA prior to use for sample collection.]

- Allow a reliable and consistent DBS sample collection (e.g., no clotting of blood before the dried blood spots are deposited onto the absorbent sample support); data from the equipment manufacturer and/or results of testing by a testing institution that is independent of the manufacturer may be used for the assessment of product reliability (e.g., expected failure rate of DBS collection);
- Allow the collection of a known volume of capillary blood and its application on an absorbent sample support and/or allow hematocrit correction/measurement;
- Have a built-in indicator or similar visual cues showing that an acceptable volume of sample has been collected;
- DBS sample collection devices with integrated microneedle(s)/microlancet(s) should allow collection and direct depositing on the absorbent sample support without physical manipulation by the SCP (e.g., does not require on-site pipetting at the DCS, thus avoiding risk of contamination of the DBS sample);

  [Comment: When a DBS sample is collected by finger-pricking, the use of capillary tubes to transfer blood from the finger-prick to the absorbent sample support is permitted but should not be encouraged. In any case, it is important to only use capillary tubes that are untreated and do not contain anticoagulants.]
- The sample container should be designed to prevent the absorbent sample support from adhering to the sample container (e.g., spacer); and
- The “A” and “B” samples should be noticeably and easily separable without physical manipulation of the absorbent sample support after collection (e.g., no cutting a DBS card with scissors).

Analysis of multiple samples

When two or more DBS samples are collected from an athlete, during the same sample collection session, only one sample must be analyzed by the Laboratory, unless otherwise instructed by the TA and/or required by the Analytical Testing Procedure (for example if the laboratory needs to combine several DBS samples to have a sufficient volume to perform the required Analytical Testing Procedures.

SECTION 4:
STORAGE OF SAMPLES AND DOCUMENTATION

ISTI 8.1

Objective: To ensure that all *Samples* collected at the *Doping Control* Station and *Sample* collection documentation are securely stored prior to transport from the *Doping Control* Station.

ISTI Article 8.3.1 states that SCAs must define criteria ensuring that each sample collected is stored in a manner that protects its integrity, identity and security prior to transport from the DCS. Minimum criteria includes:

- detailing and documenting the location where samples are stored; and
- who has custody of the samples and/or is permitted access to the samples.

The SCP must ensure that any sample is stored in accordance with these criteria.

Urine samples can be stored at room temperature or in a cool environment to avoid warm conditions. However, if the samples are not to be provided to the courier the same day as collected and transported to the Laboratory without delay, it is recommended to liaise with the Laboratory and to consider refrigerating or freezing the samples during storage to minimize sample degradation due to factors like time delays and hot temperature conditions.

Venous blood samples must be stored in a cooled state immediately after collection, preferably in a refrigerator or cool box. The temperature must be monitored with a temperature data logger.

DBS samples can be stored at room temperature or in a cool environment. As best as possible, the objective is to avoid storing DBS samples in warm conditions.

For detailed guidance for SCP on the procedures for using a temperature data logger refer to WADA's *Template DCO Manual Section 6.2.3*.