

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

DEFINITIONS

1. What is an Adverse Analytical Finding (AAF)?

An AAF is a report from a [WADA-accredited laboratory](#) or other [WADA-approved laboratory](#) that, consistent with the International Standard for Laboratories (ISL) and related Technical Documents, identifies in a sample the presence of a Prohibited Substance or its metabolites or markers (including elevated quantities of endogenous substances) or evidence of the use of a Prohibited Method.

2. What is an Atypical Finding (ATF)?

An ATF is a report from a WADA-accredited laboratory or other WADA-approved laboratory, which requires further investigation, as provided by the ISL or related Technical Documents, prior to the determination of an AAF.

3. What is an Anti-Doping Organization (ADO)?

An ADO is a [Signatory](#) to the [World Anti-Doping Code \(Code\)](#) 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 (IOC), the International Paralympic Committee (IPC), other Major Event Organizations (MEOs) that conduct Testing at their Events, International Federations (IFs), and National Anti-Doping Organizations (NADOs).

4. What is a Testing Authority (TA)?

A TA is the organization that has authorized a particular sample collection; whether:

- an ADO; or,
- another organization conducting testing pursuant to the authority of, and in accordance with, the rules of the ADO (for example, a National Federation that is a member of an International Federation).

5. What is ADAMS?

ADAMS (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 line with data protection legislation.

6. What is the Athlete Biological Passport (ABP)?

The fundamental principle of the [ABP](#) is to monitor selected variables (‘biomarkers of doping’) over time that indirectly reveal the effect of doping, as opposed to the traditional direct detection of doping by analytical doping controls.

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

ABOUT THE REPORT

7. What does the 2016 Testing Figures Report represent?

The 2016 Testing Figures Report (2016 Report) is a summary of all doping control samples analyzed and reported by 34 WADA-accredited laboratories in 2016. This includes all testing conducted worldwide by Signatories to the Code – in- and out-of-competition for urine; blood and ABP blood data; and, the analytical results of such analysis – including AAFs and ATFs.

The 2016 Report offers a comprehensive reflection of global anti-doping testing figures, which allows organizations to observe patterns of doping control programs by sports, organizations, substances and laboratories; and, as a result, adapt their anti-doping strategies accordingly.

The 2016 Report represents the second set of global testing data since the revised Code came into effect on 1 January 2015.

8. What figures are included in the 2016 Report?

The 2016 Report includes all analyses reported by the WADA-accredited laboratories and the laboratories that were approved by WADA to conduct blood testing exclusively for the purposes of the ABP ('approved laboratories').

For the first time, the figures are compiled according to the 'Sample Collection Date' (and not the sample 'Reception Date' by the laboratory) as a result of efforts made by the laboratories to incorporate the collection date into their ADAMS reporting. It is considered that this will allow TAs to more closely align the ADAMS data with their annual testing programs. These figures are associated with specified sport categories.

The 2016 Report also includes some data that has not been submitted individually into ADAMS, but instead has been aggregated and included in only the overall testing figure tables. This allows a continuous year-to-year comparison of the overall figures. These aggregated figures are primarily comprised of professional and university testing programs conducted by organizations in North America (e.g. the National Collegiate Athletic Association and the Major Leagues), which are not Code Signatories; although, they use WADA-accredited laboratories in North America. Due to confidentiality provisions within their service contracts, they do not allow reporting of individual data in ADAMS.

9. Did the implementation of the 2015 Code and International Standard for Testing & Investigations (ISTI) by ADOs [e.g. the Technical Document for Sport Specific Analysis (TDSSA)] impact the results?

Yes.

The [TDSSA](#) is a mandatory, level two document that came into effect on 1 January 2015. As required under the 2015 Code, ADOs have applied the TDSSA.

The TDSSA is intended to ensure that Prohibited Substances within the scope of the TDSSA, which are deemed to be at risk of abuse in certain sports/disciplines, are subject to an

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

appropriate and consistent minimum level of analysis by all ADOs. Under the TDSSA, ADOs are required to conduct a minimum level of analysis for the following three groups of prohibited substances; Erythropoietin Stimulating Agents (ESAs), Growth Hormone (GH) and GH Releasing Factors (GHRFs).

The findings of the 2016 Report highlight that there was a significant increase in testing by ADOs in these three groups when compared to 2015 with:

- an increase in the recording of TDSSA defined disciplines;
- a 32% increase in GH testing (mainly due to hGH biomarkers testing);
- a 29% increase in ESAs testing in urine and a 7% increase in blood testing including a significant increase in the number of ESA AAFs reported in blood samples; and
- a 127% increase in total testing for GHRFs.

The 2016 Report also shows a significant increase in the number of TAs conducting, and sports receiving, testing for the three groups of Prohibited Substances. When compared to 2015, there was an increase in AAFs in all three groups with 21 additional AAFs for ESA and two additional AAFs for GH and one additional AAF for GHRFs.

Therefore, the 2016 Report demonstrates that the TDSSA continues to have an impact on anti-doping testing programs, achieving a greater level of global harmonization for the testing of these prohibited substances across sports and disciplines and, in turn, providing further protection to clean athletes.

2016 REPORT VERSUS 2015 REPORT

10. How does the data from the 2016 Report compare to the 2015 Report?

Based on all ADAMS and non-ADAMS results reported by the laboratories, there was a 0.9% decrease in the number of overall urine and blood doping control samples. The number of urine samples overall decreased from 282,193 to 277,267 while the number of blood samples increased from 21,176 to 23,298 between 2015 and 2016. If including the ABP blood (passport) samples, then approximately 357 more samples were analyzed in 2016 ([2016 Laboratory Report – Table 3](#)) than in 2015 ([2015 Laboratory Report – Table 3](#)).

Approximately 60% of the accredited laboratories had an increase in the total number of overall samples recorded in 2016 compared to 2015.

In terms of AAFs, there was a noteworthy increase in the percentage of AAFs reported: 1.26% (3,809 AAFs from 303,369 samples) in 2015 to 1.60% in 2016 (4,822 AAFs from 300,565 samples).

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

In addition, there was an increase in the percentage of Total Findings (AAFs and Atypical Findings – ATFs – combined) from 1.49% in 2015 to 1.81% in 2016. An increase in the Total Findings was attributed to the increase of AAFs as the number of ATFs reported decreased as an expected consequence of the new guidelines for the reporting and management of Human Chorionic Gonadotrophin (hCG) and Luteinizing Hormone (LH) findings. In addition, there was an increase in the number of AAF findings from the application of the gas chromatography combustion isotope ratio mass spectrometry (GC/C/IRMS) test applied to the markers of the steroid profile: 3.2% in 2015 (176 AAFs from 5,578 samples) to 3.6% in 2016 (169 AAFs from 4,676 samples). Furthermore, there was a noteworthy increase in the number of AAF findings from the application of the ESA test to blood samples: 0.03% in 2015 (1 AAF from 3,219 blood samples) to 0.64% in 2016 (22 AAFs from 3,464 samples).

Nearly all drug classes (S1, S2, S3, S5, S6, S7, M2 and in particular drug class S4 - Hormone and metabolic modulators) saw an increase in the number of Prohibited Substances reported as AAFs.

There was a relative increase in the overall number of non-ABP blood samples analyzed: 6.98% in 2015 (21,176 of 303,369) to 7.75% in 2016 (23,298 of 300,565).

There also continues to be a noteworthy rise in testing for the key Prohibited Substances of: GH, ESAs and GHRFs, as encouraged by the TDSSA. [See *the previous question for more details.*]

11. Was the 2016 data collected differently than in 2015?

Yes, the 2016 Report was compiled using the sample collection date instead of the laboratory reception date in order to compile those samples collected between 1 January 2016 and 31 December 2016.

Otherwise, the 2016 data was collected using ADAMS, as was the case from 2012 onwards. Data predominantly from professional leagues and universities in North America was aggregated as per previous years. Since 2012, the laboratories began reporting negative data in addition to the AAFs and ATFs reported. This has allowed all data – negatives as well as AAFs and ATFs – to be compiled from ADAMS. The details and structure of the data in ADAMS are the reason that the 2012 to 2016 Reports offer a much more thorough view of anti-doping data than the reports prior to 2012.

As an example, the use of ADAMS has allowed the Testing Figures reports to differentiate the testing figures by discipline, TA, and in- and out-of-competition testing. This offers stakeholders a more detailed view of the worldwide fight for the protection of clean sport.

12. Are there any differences in format between the 2016 and 2015 Reports?

Yes.

AAFs per Drug Class and Sport Disciplines

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

For the first time, the 2016 Report includes the number of samples analyzed by the GC/C/IRMS method on 19-norandrosterone and boldenone as per the technical document TD IRMS. In 2016, ADAMS continued to allow the reporting of GHRFs, GnRH, Insulin, IGF-I, and hGH biomarkers, when conducted, in a standardized way. WADA has been encouraging ADOs to conduct more comprehensive testing in line with the TDSSA and, in the 2016 Report, the number of these analyses is included.

Categorization of Sport Disciplines

The sports continue to be compiled in the following eight major categories:

1. ASOIF (Association of Summer Olympic International Sports Federations)
2. AIOWF (Association of International Olympic Winter Sports Federations)
3. ARISF (Association of IOC Recognized International Sports Federations)
4. AIMS (Alliance of Independent Recognized Members of Sport)
5. IPC (International Paralympic Committee)
6. Sports for Athletes with an Impairment
7. Other Sports – Code Signatories
8. Other Sports

The sports data is further differentiated based on the disciplines that are included within the associated International Federations' (IFs) authority and the structure provided by the sport-discipline codes in ADAMS (as determined by the IF).

In addition, the sport figures can differentiate sports within the Olympic program which are emanating from university sport disciplines, e.g. those disciplines that are not likely to be under the authority of the relevant IF; thus, providing more accurate data than previously with respect to the relevant IFs. The 2016 Report includes more samples that are assigned to specified disciplines than in 2015, which suggests that TAs are incorporating the TDSSA-defined sport disciplines into their sample collection procedures and documentation.

For example, the testing figures under ASOIF sport 'Rugby Union' include only data from Rugby Union and Rugby Sevens, which are under the auspices of World Rugby. Other disciplines categorized under Rugby such as Rugby League, Beach Rugby, Touch Football are included in 'Other Sports'. Furthermore, the TA tables in the TA report clearly differentiate the TAs that contributed to the Rugby Union and Rugby Sevens data, i.e. World Rugby, each National Anti-Doping Organization (NADO), etc. ADOs using ADAMS also have the ability to further clarify testing conducted under the umbrella of their organization.

In another example, the testing figures under ASOIF sport 'Athletics' include an increase in the number of TDSSA disciplines assigned to the samples. In 2015, nearly 36% (10,848 of 30,308 Athletics samples) were recorded in ADAMS with TDSSA defined disciplines; however, this more than doubled in 2016, with 73% (22,947 of 31,433) of Athletics samples recorded in ADAMS under a TDSSA defined discipline.

Growth Hormone (GH)

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

Results from the second year of the human growth hormone (hGH) biomarker test for 2016 are included. New guidelines for the hGH biomarkers test were published in 2015, which established a harmonized approach in the application of the hGH biomarker test including decision limits for interpretation and reporting of results. ADAMS permitted the compilation of the tests conducted in a standardized way.

RELATIONSHIP TO OTHER WADA REPORTS

13. How does this 2016 Report differ from the Anti-Doping Rule Violations (ADRVs) Reports?

The 2016 Report highlights the results of analyses performed by WADA-accredited laboratories on urine and blood samples for 2016, as reported into ADAMS. It does not illustrate statistics on whether the AAFs or ATFs reported became ADRVs.

The data in the 2016 Report may not correspond with the number of ADRVs reported by ADOs because all reported results are still subject to the full results management process conducted by ADOs. This includes matching results with Therapeutic Use Exemptions (TUEs) – through which the use of a banned substance can be approved by an ADO for legitimate medical reasons – longitudinal studies and ensuring that sample collection and analysis were conducted in accordance with the relevant international standards.

In simple terms, not all AAFs or ATFs lead to ADRVs.

Meanwhile, the [2015 ADRV Report](#), issued in April 2017, illustrates the incidence of doping in global sport during 2015. The ADRV Report shows both analytical and non-analytical ADRVs (or sanctions, as they are commonly known). The Report breaks down sanctions by sport, TA and nationality.

The reason the ADRV Report, which was published in 2017, includes 2015 statistics; whilst, this 2016 Testing Report includes 2016 statistics, is because for ADRVs, the results management process can take a long time from the first signs of a potential violation through to the end of a case. Cases take time to be resolved before they can be adequately prepared and published.

The 2016 Report, combined with the 2016 ADRV Report that will be released in 2018, will provide powerful data, which will help ADOs gain a better understanding of global doping patterns. This will help them adapt their strategies to further protect clean athletes.

14. Why doesn't ADAMS itself illustrate the number of ADRVs or anti-doping sanctions?

ADAMS cannot yet provide a full and accurate picture of the number of ADRVs or anti-doping sanctions as not all ADOs are using ADAMS at this time.

ADAMS has the capability to record ADRVs by results management authorities. ADAMS also has the capability to record sample collection information and athlete profiles all within a secure and World Anti-Doping Code-compliant environment. This information is not reflected in the

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

2016 Report because the figures were compiled with data entered by the WADA-accredited laboratories and not the ADOs themselves.

All these functions are available to ADOs at no cost. With the full adoption of ADAMS by ADOs, the sporting community would have a more transparent means for tracking results from collection to sanction, while respecting confidentiality. In addition, a complete analysis of data would be available, including linking AAFs to TUEs and sanctioned cases.

THE DATA

15. How many Testing Authorities (TAs) are included?

The 2016 Report includes data from at least 413 different TAs, a slight increase over the 403 from 2015. This continues to include a number of National Federations (NFs) conducting testing. NFs themselves are not Signatories to the Code; and, therefore, are not entitled to authorize testing independently – although the rules of some NADOs and IFs may delegate testing authority to these bodies. As a result, tests attributed to NFs may in some instances be part of NADO or IF programs.

NADOs continue to be responsible for a significant portion of worldwide anti-doping efforts, having been the responsible TAs for 63% of the samples analyzed in 2016. IFs, meanwhile, were responsible for 20% of samples analyzed (comprising testing conducted by AIMS, ARISF, AIOWF and ASOIF-member organizations).

16. Which disciplines and sports organizations are included within the sports listed?

The sports and disciplines listed in the 2016 Report are reported by the laboratories as they were designated on the Doping Control Form (DCF) relating to the sample at the time of its collection. The sport codes (names) in ADAMS ensure that all laboratories are reporting sports in a more standardized manner. The 2016 Report by sport shows improvements in the reporting of specified disciplines in each sport instead of simply the sport.

WADA has initiated a review of the ADAMS sport/discipline codes in consultation with the relevant IFs in order to make sure that data is entered and reported in ADAMS more precisely. IFs are encouraged to report any corrections or updates in relation to sports and disciplines under their authority to the [ADAMS team](#).

In addition, while some NFs or Continental Sport Confederations conduct testing under the delegation of their relevant IFs, others initiate testing independently of their IF. In the latter case, the test does not appear in the IF statistics, but rather in the Confederation testing statistics provided they were noted as the TA.

17. Do laboratories have to analyze a minimum number of samples?

Yes.

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

The [International Standard for Laboratories \(ISL\)](#) requires that a WADA-accredited laboratory performs analysis on a minimum of 3,000 (including urine, blood and ABP) samples per year. Any accredited laboratory that does not meet this figure is monitored closely by WADA. In some cases, laboratory suspensions may have been the reason for the reduced total in sample analysis.

18. Why is there such a large gap between the number of AAFs for in-competition as opposed to out-of-competition?

Typically, more samples are collected in-competition than out-of-competition. The 2016 Report illustrates that, in ADAMS, a total of 124,820 samples were collected in-competition (equating to 54.4%); whilst, 104,694 samples were collected out-of-competition (equating to 45.6%).

Furthermore, by its very nature, the in-competition menu contains more drug classes and therefore more Prohibited Substances subject to detection compared to the out-of-competition menu. This is particularly the case with substances such as stimulants, cannabinoids and glucocorticoids, which are typically reported in greater numbers because they are only prohibited in-competition.

OTHER QUESTIONS

19. Is the use of ADAMS mandatory?

On 12 May 2016, WADA's Foundation Board decided to make the use of ADAMS a mandatory requirement for ADOs to enter all Doping Control Forms (DCFs) and Therapeutic Use Exemptions (TUEs) into ADAMS no later than 15 business days after sample collection or receipt of a TUE decision. This requirement came into effect on 1 June 2016.

20. Does every single sample/result in the 2016 Report represent an individual athlete?

No.

One athlete may be associated with multiple samples. Several samples may be taken from one athlete during the same sample collection session. AAFs and ATFs in the 2016 Report may also correspond to multiple findings on the same athlete, or measurements performed on the same athlete, such as through the ABP haematological and steroidal modules, over a period of time.

21. How many TAs conducted ABP blood testing?

There were 85 unique TAs that contributed to the ABP testing figures reported into ADAMS in 2016 (compared to 76 TAs that contributed to the 2015 ABP figures). The number of IFs incorporating ABP blood testing has increased from 24 in 2015 to 25 in 2016, while the number of NADOs has continued to increase from 40 in 2015 to 46 in 2016. In addition, all WADA-accredited laboratories that were accredited to perform blood analyses in support of the ABP analyzed and reported results for ABP samples into ADAMS. In 2016, there were two

2016 TESTING FIGURES REPORT QUESTIONS AND ANSWERS

laboratories approved by WADA exclusively to analyze blood samples uniquely for the ABP that analyzed and reported results into ADAMS. The total number of blood samples collected and analyzed for the ABP increased from 25,012 in 2015 to 28,173 in 2016 (a 13% increase).

22. Why are the ABP samples reported separately from other blood samples?

Blood samples are collected with the typical 'A' and 'B' samples to report AAFs (for hGH, EPO, etc.); while, ABP samples can be collected as single samples in order to measure an athlete's specified blood variables, which are then compared to his or her previous data over time. This establishes an athlete biological profile, and therefore offers an indirect method that can indicate doping or help target traditional testing.