

**A D A M S**

Anti-Doping Administration & Management System

## **ADAMS Version 3.0**

### **User Guide –**

### **WADA-Accredited Laboratories**

## Preface

This ADAMS User Guide was designed to show you how to perform basic functions within ADAMS, step by step, in the most direct way. The individual sections are arranged in a sequence that follows a typical workflow.

Throughout this document, we have used fictitious names for all persons in our screen shots and examples. Any resemblance to real persons, living or not, is purely coincidental.

Please note, too, that some screen shots may appear different than in your installation due to browser settings and hardware configuration of your computer.

## What's New in ADAMS 3.0?

This version of ADAMS 3.0 features the following enhancements:

- ADAMS **checks on duplicate entries** of analytical results whenever they are created. The check is now made on a combination of 4 parameters: sample code, sample type, lab name and date received by lab. See Section 2.2.
- It will be possible to indicate that **only metabolite(s)** were detected during the analysis (not the parent), and have this reflected in the Test report. See section 2.2.
- The PDF Test report will show a few enhancements, amongst which a reserved space in the header to display any Lab-specific **ISO logo** that has been uploaded.

### *Routine Lab results – specific:*

- In accordance with the new Doping Control Form contents, the report possibility for Laboratories will be expanded to include the **Sample Collection Authority** and the **Test Authority** as optional information as well. See section 2.2.
- The Lab results data-entry page will facilitate the completion of a mean concentration/ standard uncertainty for **threshold substances** as well as the reporting of **steroid profile variables**. See section 2.2.
- **Partial submission** will allow modifications of the comments fields (Analysis details/Explanation/Opinion and Details concerning finding). See section 2.4.

- Following further investigation, a transition from an **Atypical Finding (ATF)** result into a Negative or AAF result will be made possible. See section 3.2.
- The scope for the **import of analytical results** through **CSV/XML** files will be enlarged to contain more possible fields. See section 7.6.
- For regular Lab results the concept of **separation of functions** is introduced: the person who enters the data can be another one than who approves and submits the data. When the result is submitted/approved, the 'digital signature' of this user appears on the PDF Test Report. See section 2.7.

*EQAS – specific:*

- The term 'Proficiency test' as used previously will be systematically replaced by **EQAS** at all occurrences. See section 4.
- It is imperative for EQAS Urine samples to specify the **pH, SG** and **Screen T/E ratio**. See section 4.2.
- EQAS results for **threshold substances** need to be complemented with **Quantitative results** (Aliquots and SD) per substance. See section 4.2.

In this document, all new features are identified with an **ADAMS 3.0** icon in the right margin, as shown on the right.



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## **1 USER SETUP AND GENERAL NOTES**

### **1.1 BEFORE YOU START**

Before logging on to ADAMS for the first time, there are a few things you need to verify.

#### **1.1.1 SUPPORTED BROWSERS**

ADAMS is currently supported on the following browsers:

- Firefox Version 3.5 and 3.6
- Microsoft Internet Explorer Version 7 and 8

To verify which version you are running, click **Help /About** from the browser's main menu bar.

The Safari browser on Macintosh platforms is still not officially supported, although most of the issues encountered in the previous version users have been resolved for Safari Version 5. Should you encounter any technical issues while using ADAMS on a Macintosh computer, please report it to your ADAMS custodian organization and indicate the platform used.

Should you experience any technical issue while using a different browser, please try again using one of the above browsers. Free versions of the browsers are available at the following addresses:

<http://www.mozilla.com/en-US/firefox/all.html>

<http://www.microsoft.com/windows/internet-explorer/worldwide-sites.aspx>

#### **1.1.2 CLEAR YOUR BROWSER CACHE – IMPORTANT!**

If you used a previous version of ADAMS, it is possible that your cache contains information that will conflict with a more recent version.

In any case, **always** clear your cache before you use a new version of ADAMS. To obtain detailed instructions on how to proceed for your specific browser version, you can refer to pages such as the following: <http://www.wikihow.com/Clear-Your-Browser%27s-Cache>.

In a nutshell:

- If you are using Internet Explorer, select **Internet Options** from the **Tools** menu. Depending on the IE version you are using, you may click the **Delete** then the **Delete Files...** button in the **Temporary Internet Files** section of the **General** tab. Check the **Delete all offline content** checkbox and click **Ok** to clear your cache.
- If you are using Firefox, select **Clear Private Data** or **Clear Recent History** from the **Tools** menu. Make sure the **Cache** checkbox is selected; the other checkboxes can be blank. Then click the **Clear Private Data Now** or **OK** button.

### **1.1.3 ALLOW POP-UPS**

Enabling the pop-up blocker may prevent some screens from appearing. In the Internet Explorer “Tools” menu, select “Pop-up Blocker Settings” and add adams.wada-ama.org to your “Allowed sites” list.

- If you are using Internet Explorer, select “Pop-up Blocker Settings” from the “Tools” menu and add adams.wada-ama.org to your “Allowed sites” list.
- If you are using Firefox, select “Options” from the “Tools” menu. In the “Content” tab, click the first “Exceptions...” button and add adams.wada-ama.org to your “Allowed Sites” list.

ADAMS includes a detector on the login page which will warn users if a pop-up blocker is enabled and inform them that ADAMS requires the use of pop-ups to execute properly.

### **1.1.4 SCREEN RESOLUTION**

Make sure that your screen resolution is set to **1024x768** pixels for optimum performance. This can be set in Display Properties within Control Panel in a Windows operating environment.

### **1.1.5 USING A BOOKMARK**

If you experience difficulties logging into ADAMS, it may be because your bookmark (if any) for ADAMS is not correct. For access to the Production system, ensure that your bookmark

is set to: <https://adams.wada-ama.org>. The “s” suffix in **https** must be present. Remove any extra characters following the URL. To verify the URL:

- If you are using Internet Explorer, click the **Favorites** button to display your bookmarks on the left hand side of the screen. Right-click the ADAMS bookmark, and select **Properties**. Ensure that the URL displayed exactly matches the one shown above.
- If you are using Firefox, select **Sidebar** from the **View** menu, then select **Bookmarks** to display your bookmarks on the left hand side of the screen. Right-click the ADAMS bookmark, and select **Properties**. Ensure that the URL displayed exactly matches the one shown above.

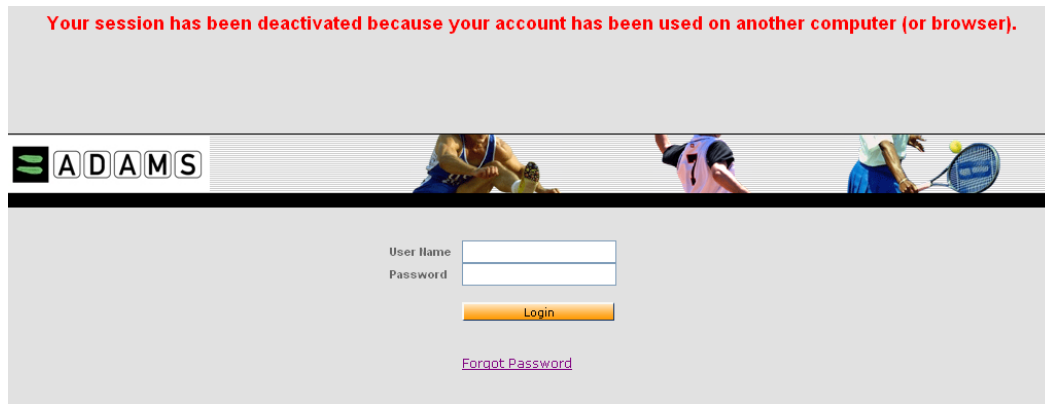
## 1.2 ADAMS BASICS

**Time Out** – For security reasons, ADAMS has been configured to time out after a certain period of inactivity. If you do not submit any data or click any of the links for this period of time, ADAMS will log you off the system. The maximum idle period is 30 minutes; should you exceed that period, then you will need to log in again.

**Back Button** – ADAMS **does not support** the use of your browser Back button and in most areas of the site you will discover that it does not work. Therefore it is required that you navigate through ADAMS by using the appropriate links. You can always return to the **My zone** page by clicking the ADAMS logo in the upper-left corner of the page:



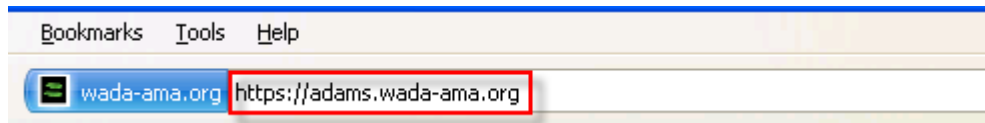
**One ADAMS Session Per User** – You can only have one single ADAMS session at a time. Should you try opening another session for the same user on a different computer or browser, the initial session will be deactivated and the following message will be displayed:



## 1.3 LOGGING IN

### 1.3.1 THE ADAMS URL

Enter the ADAMS address in the URL box of your browser: **https://adams.wada-ama.org**

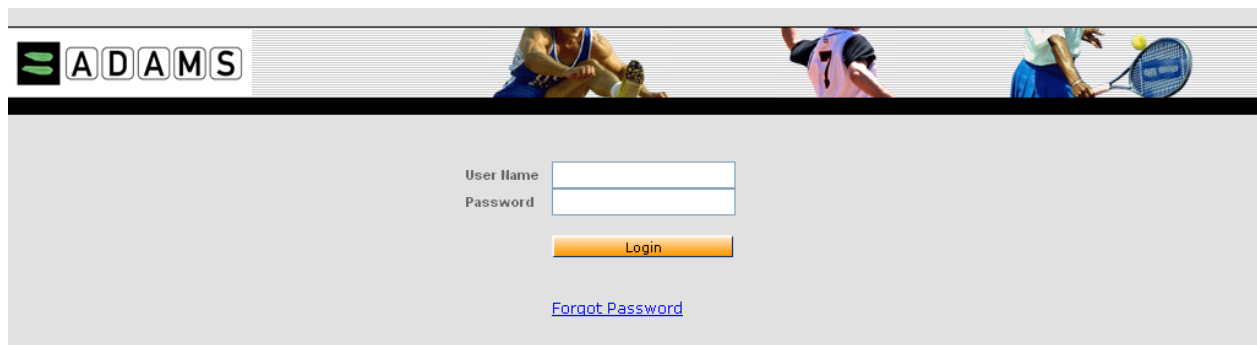


**IMPORTANT:** always include the “s” in the **https** part of the site address.

The first time you access ADAMS, it is recommended to type the address as shown above, instead of clicking a URL hyperlink from a document. Clicking a hyperlink may have caused access issues in the past on some specific platforms and browsers.

### 1.3.2 THE ADAMS LOGIN PAGE

You will be greeted with the following Log in screen:



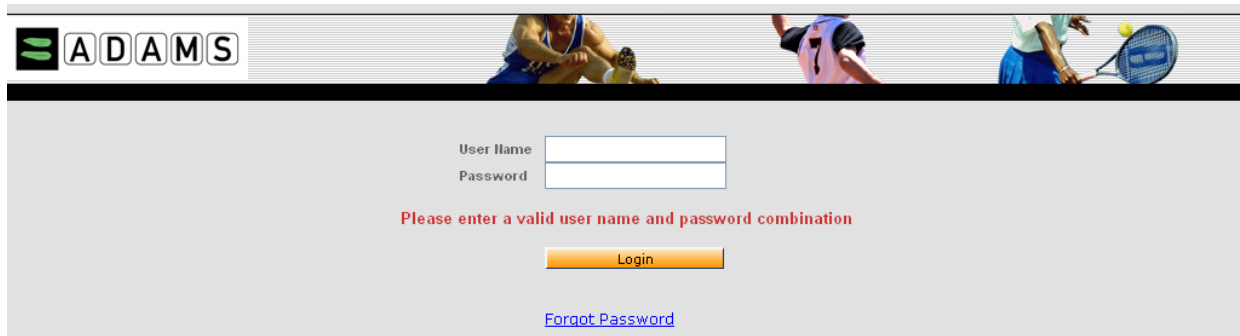
Enter the Username and Password you received from your ADAMS administrator and click the **login** button to enter the site.

Make sure that your CAPS LOCK key is not activated when you enter your password. If it is, a pop-up will remind you to turn it off.

### 1.3.3 PROBLEMS LOGGING IN

#### 1.3.3.1 Incorrect Username / Password

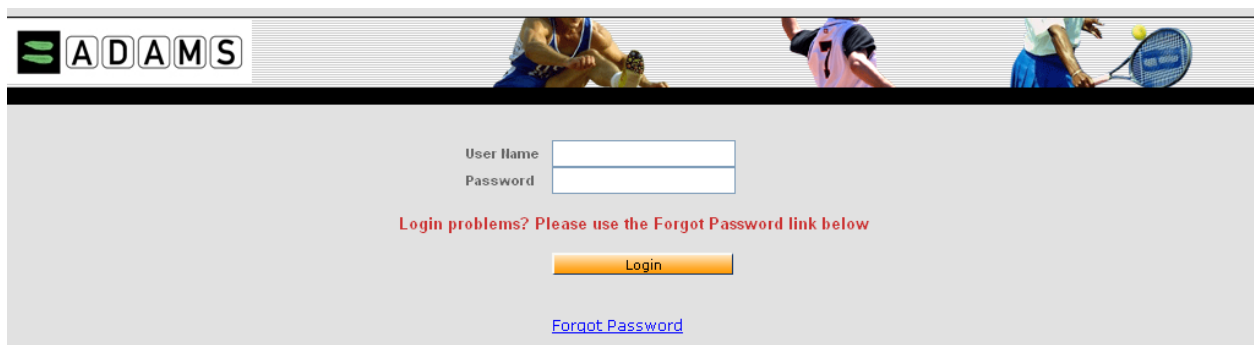
If you enter an incorrect username and password combination once or twice, ADAMS will display an error message:



The screenshot shows the ADAMS login interface. At the top left is the ADAMS logo. Below it are two input fields labeled 'User Name' and 'Password'. A red error message reads: 'Please enter a valid user name and password combination'. Below the error message is a yellow 'Login' button and a blue 'Forgot Password' link.

#### 1.3.3.2 Temporary Lock

If you enter an incorrect username and password combination at least three times in a row, ADAMS will lock you out **for 60 minutes** and display a message suggesting that you use the Forgot Password link:



The screenshot shows the ADAMS login interface. At the top left is the ADAMS logo. Below it are two input fields labeled 'User Name' and 'Password'. A red message reads: 'Login problems? Please use the Forgot Password link below'. Below the message is a yellow 'Login' button and a blue 'Forgot Password' link.

During that temporary lock period, entering the original password will **not** work. However, you may contact your custodian organization or request a temporary password – see below.

### 1.3.3.3 Permanent Lock

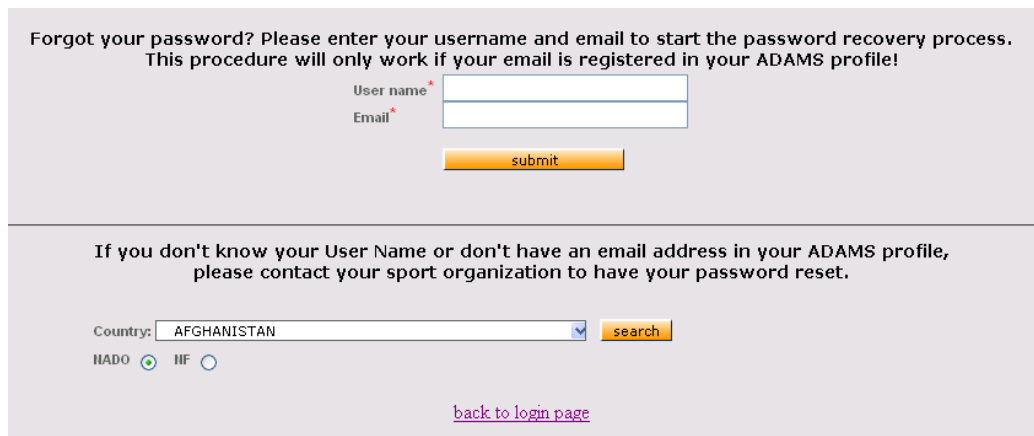
If you enter an incorrect username and password combination at least nine times in a row, ADAMS will lock you out “permanently”. At this stage you will have to contact your ADAMS Administrator to have your password reset. The temporary password will **not** work if you are permanently locked out.

### 1.3.3.4 Forgotten User Names

Contact your ADAMS administrator if you forgot your ADAMS username.

### 1.3.3.5 Forgotten Passwords

You can click the “Forgot Password” link at the bottom of the ADAMS Login page, which will display the **Forgot Password** page:



Forgot your password? Please enter your username and email to start the password recovery process. This procedure will only work if your email is registered in your ADAMS profile!

User name\*

Email\*

---

If you don't know your User Name or don't have an email address in your ADAMS profile, please contact your sport organization to have your password reset.

Country:

IADO  IIF

[back to login page](#)

If you forget your password, you have two options:

1. **Request a Temporary Password:** If your ADAMS profile contains your email address, you can request a temporary password through email. Simply enter your username and email address – the same as the one saved in your ADAMS profile – in the upper section of the screen, then click the submit button:

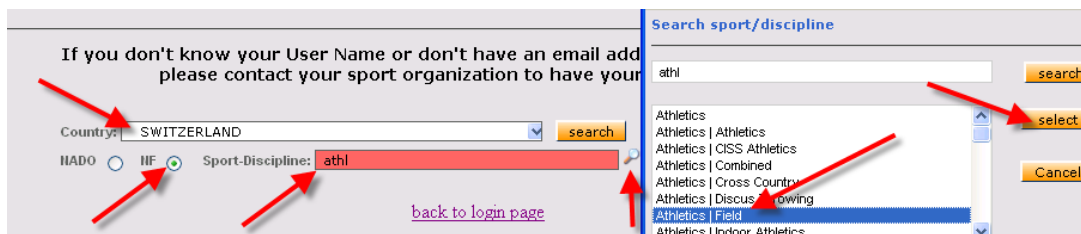
A new temporary password will be sent to the email address in your ADAMS profile shortly, and must be used within 24 hours. If you do not receive the email within the next 15 minutes, please contact your custodial organization.

[back to login page](#)

ADAMS will then send you an email containing a temporary password, which you must use within 24 hours. If you do not receive an email within 15 minutes of submitting the request, verify your spam blocker if any – since the ADAMS email

could have been intercepted – then contact your ADAMS Administrator.

2. **Contact your ADAMS Administrator:** Your ADAMS administrator can reset your status in ADAMS, and issue a new password if required. If your custodial organization is a NADO or a National Federation, you can find their coordinates in the lower section of the **Forgot Password** page: select the country from the drop-down box; if the organization is a National Federation, click the NF radio button, search the sport and discipline (enter a few letters and click the magnifying glass), select the sport and discipline; then click the search button:



### 1.3.3.6 Changing the Password

ADAMS will prompt you to change your password:

- if you login to ADAMS with a temporary password, or
- on a regular basis, for security purposes.

You can also change your password from the User Preferences. Please see the Users Preferences / Password Change section for more details.

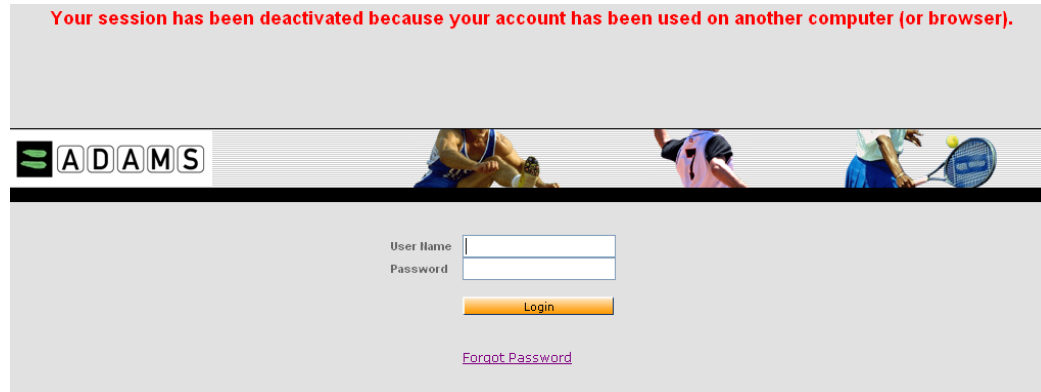
## 1.4 LOGGING OUT

When you have finished working within ADAMS and wish to exit the program, click the **Logout** link in the top right hand corner of the window banner. This will safely exit you from the system and return you to the Log In page. At this point you may safely close your browser.

Please make a habit of **always** terminating your ADAMS session by clicking the **Logout** button, in the upper-right corner of the ADAMS page:



Should you not terminate a session properly – for example if you close your browser application or turn off your computer without logging out – then the “deactivated session” warning message might be displayed the next time you log in:



If you follow the proper logout procedure and still see the above warning message, please contact your ADAMS administrator.

## **1.5 WHAT TO DO IF YOU ENCOUNTER AN ERROR**

From time to time you may encounter an error on the ADAMS system. The more information that can be compiled about the circumstances around the error the easier it is to track and fix it quickly.

### **1.5.1 COLLECT INFORMATION**

Please take the time to submit the details.

1. Right-click the red error text (not the “running man” picture)
2. Select **View source**
3. Save the .txt file
4. Send an email to [adams@wada-ama.org](mailto:adams@wada-ama.org) and attach the .txt file



### **Other Useful Information**

- What time the error occurred
- What Internet browser you use
- What operating system (Windows XP, Windows Vista, Linux, etc) you run
- The speed of your Internet connection
- Your user name (only Username, not Password) and Organization
- What part of the screen the message was located in
- It is useful to mention the series of actions that occurred before the error was encountered, for example: how you accessed the page where the issue occurred, which link or button was clicked,, what value was entered or selected from a drop-down, was the "Previous" or "Next" button of your browser used - those are usually not supported in ADAMS- etc. Does the error occur consistently, and if so, how can you recreate it?
- Screenshot of the screen in error can also be useful.

#### **1.5.2 CONTACT THE ADAMS HELP DESK**

A Helpdesk is available to answer technical user queries about ADAMS. The Helpdesk, located in Québec, Canada, is available from Monday to Friday from 9am to 5pm Eastern Time.

1. From North America dial: (866) 922-3267 (1-866-92-ADAMS)
2. From outside North America you may reach the Helpdesk by dialing:  
+1 (514) 904-8800

Should you require assistance outside of the helpdesk core hours please send an email at [adams@wada-ama.org](mailto:adams@wada-ama.org).

## 2 ANALYTICAL RESULTS FROM LABORATORIES

As a Lab User in ADAMS you must log on using an account set up to create and access Lab Results.

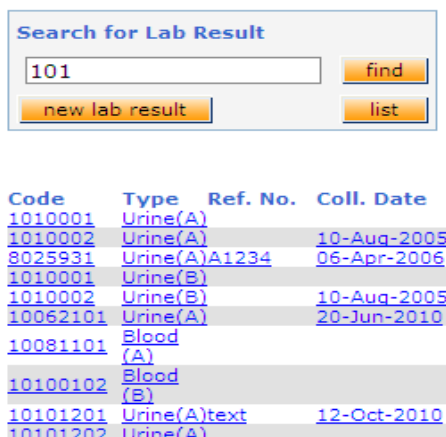
The Lab Results section is used to record results of the tests run on an athlete's sample. It allows the user to record all information related to a sample's findings, however will never display the name of the athlete whose sample it is.

In ADAMS a Lab can only access its own data.

Once a Lab Result record is **Submitted** or **Partially submitted**, if the sample is an **AAF** (a positive finding) or an **ATF** (an Atypical finding), it will automatically match the sample to an athlete based on criteria in the Lab Results record and in the Doping Control Form that was created when the test was performed on the athlete. This means that it is very important for all information to be recorded accurately.

### 2.1 SEARCHING FOR A LAB RESULT

1. Go to the 'Search for Lab Result' area.
2. To see all results accessible by your Laboratory click on the **List** button.



| Code                     | Type                         | Ref. No.              | Coll. Date                  |
|--------------------------|------------------------------|-----------------------|-----------------------------|
| <a href="#">1010001</a>  | <a href="#">Urine(A)</a>     |                       |                             |
| <a href="#">1010002</a>  | <a href="#">Urine(A)</a>     |                       | <a href="#">10-Aug-2005</a> |
| <a href="#">8025931</a>  | <a href="#">Urine(A)</a>     | <a href="#">A1234</a> | <a href="#">06-Apr-2006</a> |
| <a href="#">1010001</a>  | <a href="#">Urine(B)</a>     |                       |                             |
| <a href="#">1010002</a>  | <a href="#">Urine(B)</a>     |                       | <a href="#">10-Aug-2005</a> |
| <a href="#">10062101</a> | <a href="#">Urine(A)</a>     |                       | <a href="#">20-Jun-2010</a> |
| <a href="#">10081101</a> | <a href="#">Blood</a>        |                       |                             |
|                          | <a href="#">(A)</a>          |                       |                             |
| <a href="#">10100102</a> | <a href="#">Blood</a>        |                       |                             |
|                          | <a href="#">(B)</a>          |                       |                             |
| <a href="#">10101201</a> | <a href="#">Urine(A)text</a> |                       | <a href="#">12-Oct-2010</a> |
| <a href="#">10101202</a> | <a href="#">Urine(A)</a>     |                       |                             |

3. To search for a specific lab result from the list there are several types of criteria you can use to search by, as listed below. These criteria get entered in the **Search for Lab Results** field. Enter your search criteria and click on the **Find** button. This text is not case-sensitive.

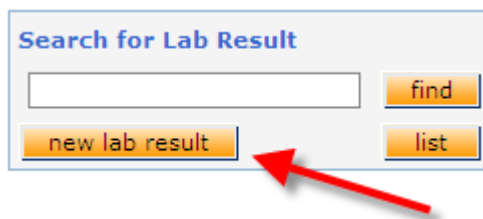
- a. Code
- b. Type
- c. Ref. No

In the returned results the Collection Date will also be shown. Clicking one of the column names will sort the results accordingly.

4. Select the lab result by clicking on any of the links in the list.

## 2.2 CREATING A LAB RESULT

1. Go to the Search area.
2. Click on the **New lab result** button.



Lab Results
cancel
save
auto-complete

|  |  |  |
|--|--|--|
| <b>Sample Code*</b><br><input style="width: 95%;" type="text"/>    | <b>Sample Collection Date</b><br><input style="width: 95%;" type="text" value="dd-MM-yyyy"/> | <b>Country</b><br><input style="width: 95%;" type="text"/> |
| <b>Lab Reference #</b><br><input style="width: 95%;" type="text"/> | <b>Sample Type*</b><br><input style="width: 95%;" type="text" value="Urine"/>                | <b>Region</b><br><input style="width: 95%;" type="text"/>  |
| <b>Mission Order</b><br><input style="width: 95%;" type="text"/>   | <b>Sample A/B</b><br><input style="width: 95%;" type="text" value="Sample A"/>               | <b>City</b><br><input style="width: 95%;" type="text"/>    |

|   |   |   |
|---|---|---|
| <b>Specific gravity</b><br><input style="width: 95%;" type="text"/> | <b>pH</b><br><input style="width: 95%;" type="text"/> | <b>Screen T/E Ratio</b><br><input style="width: 95%;" type="text"/> |
|---|---|---|

|  |  |  |
|--|--|--|
| <b>Date Received by Lab*</b><br><input style="width: 95%;" type="text" value="dd-MM-yyyy"/>  | <b>Creator</b><br><input style="width: 95%;" type="text" value="TESTLAB - Test Laboratory"/> | <b>Send Notification of Results to :</b><br><input style="width: 95%;" type="text"/> |
| <b>Date Results Reported</b><br><input style="width: 95%;" type="text" value="18-Nov-2011"/> | <b>Lab</b><br><input style="width: 95%;" type="text" value="TESTLAB - Test Laboratory"/>     | <div style="border: 1px solid gray; height: 100px;"></div>                           |
| <b>Analysis Date and Time</b><br><input style="width: 95%;" type="text" value="dd-MM-yyyy"/> | <b>Result Management Authority*</b><br><input style="width: 95%;" type="text"/>              |  |
| <b>Test Authorized By</b><br><input style="width: 95%;" type="text"/>                        | <b>Sample Collection Authority</b><br><input style="width: 95%;" type="text"/>               | <input type="button" value="remove"/>  |

|   |  |   |
|---|--|---|
| <b>Test type*</b><br><input type="radio"/> In competition<br><input type="radio"/> Out of competition | <b>Sport Discipline*</b><br><input style="width: 95%;" type="text"/> | <b>Gender</b><br><input style="width: 95%;" type="text" value="X(Unknown"/> |
|---|--|---|

|   |  |
|---|--|
| <b>Status*</b><br><input style="width: 95%;" type="text" value="Not Submitted"/>      | <b>Test Result*</b><br><input style="width: 95%;" type="text" value="Negative"/> |
| <b>Status Reason *</b><br><input style="width: 95%;" type="text" value="New record"/> | <b>Test Result Reason</b><br><input style="width: 95%;" type="text"/>            |

Analysis Results
Monitored Substances


EPO    GC/C/IRMS    OTHER

**Analysis Details/Explanation/Opinion**

**Analytical Finding**

**Steroid Profile Variables**

- Fill in the **Sample Code** and select the **Sample type**. These fields are mandatory at all times.

 *Is it possible that two (or more) different laboratories are entering the exact same sample code/type in ADAMS? How can I enforce the creation in that case?*

Yes, nowadays it is very well possible in practice that duplicate sample codes exist, since there are different manufacturers who have their own numbering system. It could occur that coincidentally the same number is used by one or more of these manufacturers.

ADAMS checks on duplicate entries of analytical results whenever they are created. Upon entering a sample code in ADAMS where this code already exists in ADAMS, a “possible duplicate”- warning will be displayed, as in the example:



The duplication check is made on a combination of the 4 parameters: Sample Code, Sample type (urine/blood), Lab name and Date received by Lab (since release 3.0). In case the sample code and sample type are the same, but the Lab name or only the Date received by Lab is different, it is possible to enforce the data-entry of your result. Simply clicking on the Save-button on top of the page and disregarding the warning message would suffice.

Data-entry will be hampered though and prevented by ADAMS if the same lab enters the same sample code/type and same Date received (assuming it is not the B sample).

- If a corresponding DCF exists in ADAMS for this sample, then using the **Auto-complete** button automatically retrieves certain data from this DCF and populates this into the lab result form. Verify that the data copied is accurate and add other additional information.

[Fields copied are: Mission order #, Sample collection date, country/region/city, Lab, TA, SCA, RMA, Test type (in/out of competition), Sport/discipline, Gender]



If no Auto-complete is used:

5. Enter a Lab reference number (this could be the Client's Batch ID#) and Mission Order number if relevant.
6. Enter the sample collection date and the sample type, specify A or B sample.
7. Fill in the country, region and city for the sample collection.
8. Fill in the **Specific gravity** (now mandatory on the DCF form), **pH**, **Screen T/E ratio**
9. Enter the date the sample was received at the Lab, and (optionally) the Date Results reported and the Analysis Date & time.  
*[The Date Results reported indicates the date of your submission through ADAMS and thus the date that the sample analysis results were reported to the RMA. So it does not refer to the date the entry was made in ADAMS (this date of entering the record into ADAMS can be verified from the Activities tab). The Analysis date relates to the date when the initial analysis of the sample starts].*
10. Specify the **Results Management Authority**. The field Creator is a READ-only field displaying the organization that created the Lab Result record.



*If the client organisation is not listed and selectable in the Result Management Authority pick list, whom should be contacted?*

*Whenever you deal with an IF, NADO or NF as RMA that has not been recorded in ADAMS, please let us know at [adams@wada-ama.org](mailto:adams@wada-ama.org), so we could add this organization in ADAMS allowing you to proceed with the reporting of the results.*



*How do I find out which of my client Result Management Authorities are able to access the analytical results in ADAMS?*

*The latest List of organizations with access to ADAMS is found following this link:  
<http://www.wada-ama.org/en/ADAMS/ADAMS-News/List-of-organizations-using-ADAMS>*

*These organizations do possess an ADAMS login account and are in principle able to receive your results.*

*When you log in onto ADAMS, you can find the contact details of your clients through the Contacts-link in the header of the ADAMS-page. This link provides you with an overview of all available and acceptable RMA's with their short names (to be used in your XML). You can narrow down the list by selecting only IF, NADO, NF's, etc. or search by country, sport, etc.*

11. Specify the **Sample Collection Authority** and the **Test Authority**.



12. Select who should be notified with the results in the **Send Notification of results to** box. [*WADA, RMA are automatically notified; IF as per ISL only for AAF results*]. Click on the magnifying glass icon to search.

13. Select the **test type** – In or Out of Competition and the **Gender**. If In-Competition is selected, a text box for the Competition Name appears.

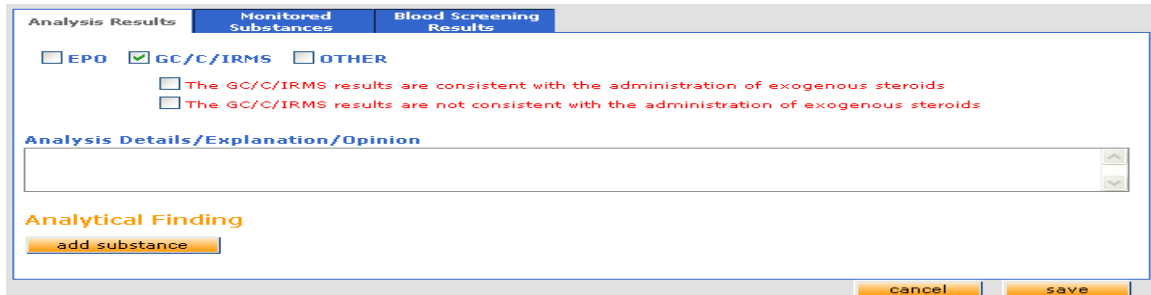
14. Fill in the **Sport/discipline**. This field is populated by searching for the relevant sport/discipline from the database. Enter at least three letters from the desired sport name. Click on the magnifying glass icon to search. Select your Sport/Discipline from the pop up window.

15. Fill in the **Test result**. The **Test result reason** text box can be used to detail an explanation, e.g. in case the sample has not been analyzed (status entered as "not analyzed") or when an ATF turns into an AAF.

Possible values for a **Test result**:

- *Negative*: The analysis did not reveal a prohibited substance or high T/E ratio.
- *AAF*: Adverse Analytical Finding. A prohibited substance or metabolite or maker was found
- *ATF*: Atypical Finding. When further investigation is needed
- *Not analyzed*

16. Specify the **Type of analysis**: for Blood – hGH, Transfusion, HBOCS, Other; for Urine - EPO, GC/C/IRMS, OTHER. When a GC/C/IRMS analysis is done, the user will have to declare if the results are consistent with the administration of exogenous steroids.

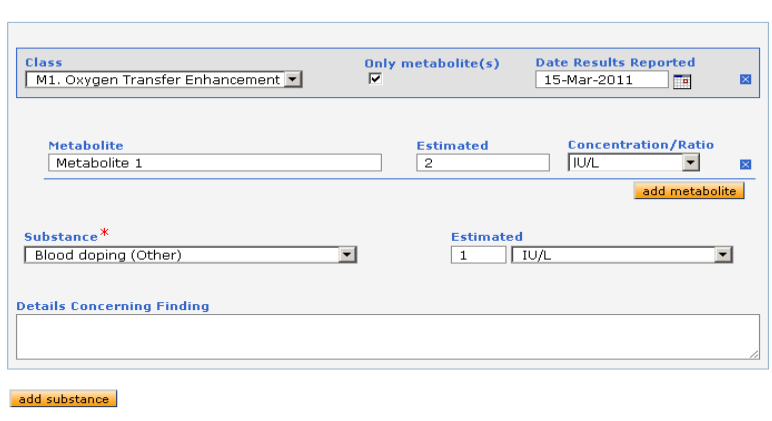


[When importing lab results: If the result is AAF or ATF then the first checkbox will be ticked automatically. If the status is negative, then the 2<sup>nd</sup> checkbox will be ticked.]

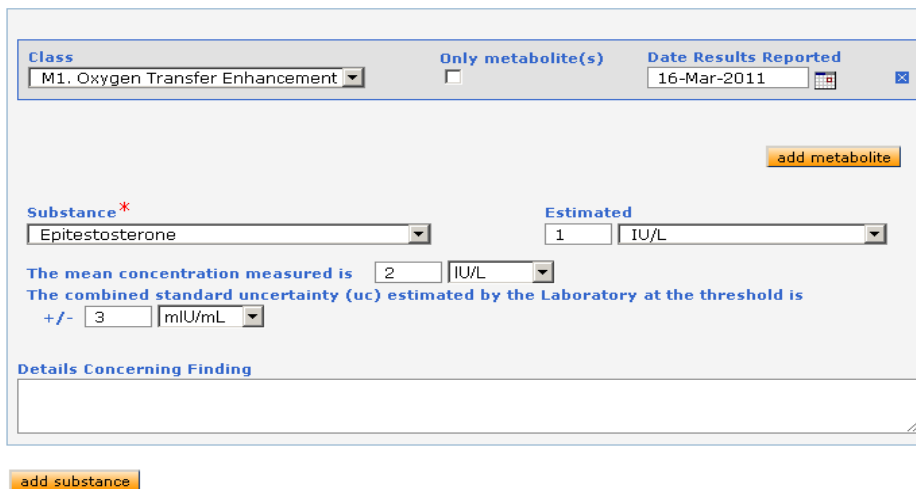
17. If applicable, enter details about the analysis in the **Analysis Details/Explanation/Opinion** text box.
18. To add a metabolite and/or prohibited substance click on the **Add Substance** button, and select the required Class. *The substance is mandatory* when a substance class is selected. Click on the **Add Metabolite** to detail possible associated metabolite(s), and enter the appropriate information. If more than one prohibited substance and/or metabolite is to be reported, then click on the **Add Substance** and/or **Add Metabolite** button to detail each finding.



The **Only metabolite(s)** checkbox can be checked to indicate that only metabolite(s) were detected during the analysis (not the parent). This will be explicitly reflected as such and clearly stated in the pdf Test report (produced by dint of the *Print analysis result record- button*). When the box is checked, at least one metabolite in combination with a substance/class has to be specified at the time of (partial) Submission.



19. If a specific so-called **Threshold substance** (e.g. "morphine > DL of 1.2 µg/mL") is selected when Adding a substance in the previous step, then automatically the concentration/uncertainty section appears, which can be completed:

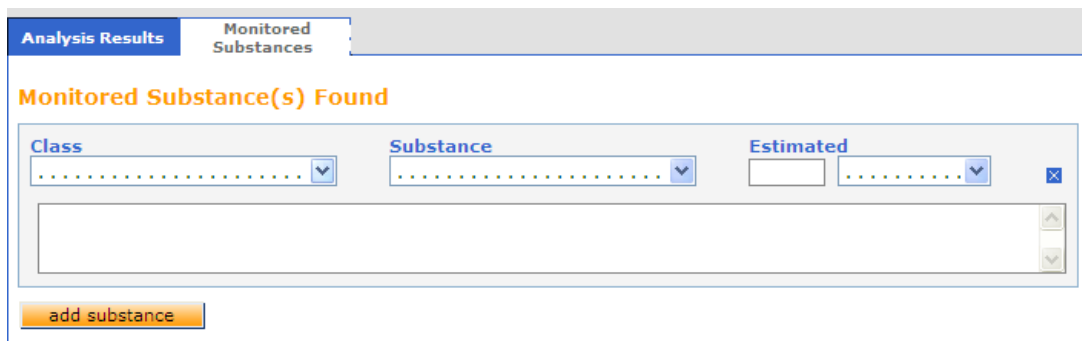
20. For the reporting of endogenous steroids (steroid profile data) a dedicated section **Steroid Profile Variables** can be used. Checking the box opens the input fields:



|  |                      |
|--|----------------------|
| <input checked="" type="checkbox"/> <b>Steroid Profile Variables</b> |                      |
| 5 $\alpha$ -androstanediol   | <input type="text"/> |
| 5 $\beta$ -androstanediol  | <input type="text"/> |
| androsterone   | <input type="text"/> |
| epitestosterone  | <input type="text"/> |
| etiocholanolone  | <input type="text"/> |
| testosterone   | <input type="text"/> |

The data-entry is optional, yet when a value is entered and saved the Specific Gravity field becomes mandatory for Urine samples upon (partial) Submission of the result.

21. To add a substance as part of the Monitoring Program, click on the **Monitored Substances** tab and fill in the appropriate information.



22. The default **Status** when creating a new lab result, is “Not Submitted”.

Possible values for the Status:

- *Not submitted*: This means that the result can be saved in ADAMS, but is not yet available to the Result Management Authority. *Mandatory fields can be left blank when saving, except for the Sample code field.*
- *Submitted*: Once all analysis' are complete and ready to be submitted to the Result Management Authority. All mandatory fields need to be filled out.

- *Partially Submitted*: Not all analysis' are completed [e.g. some tests are in practice so expensive that the lab waits until there are enough tests to run for the economy-of-scale]. All mandatory fields need to be filled out.
- *Cancelled*: nothing can be changed

In the **Status reason** field the actual reason and need for modifying the value should be entered (for new records there is no relevance). The main idea of having a 'reason' to be entered is for safety purposes to ensure that neither a test result nor a record status value can be selected by mistake and then saved. The consequences of an accidentally wrongly selected 'AAF/ATF' or 'submitted' could be far-reaching, more so in legal disputes.

23. If you are ready to record the result, click on the **Save** button.

24. Using the **Print Analysis Results record** button prints a PDF report of the analysis results that is formatted like a test report. You may use this function for: printout for your own records or QC, a full test report to include in Documentation Packages, a print out to send to clients not yet utilizing ADAMS. It indicates who/when has submitted the results and performed the print: *Submitted on; submitted by*.

25. If desired, Use the **Notify** button to notify other ADAMS-users within or outside your Lab

26. If desired, use the **Print**-button to print the entire sample information, in other words to create a hardcopy of the Lab result record as it is shown on the screen (page being displayed, related data in the database including data under the Tabs). It is recommended to print in View-mode and not the Edit-mode.

When you save a Lab result for the first time, the **Activities tab** will be enabled.



Via this Activities tab you can attach any files, i.e. *reference documents or publications for the attention of the RMA client*. For full details see the section Attaching Files in ADAMS.

This Activities tab also tracks the creation of and amendment to each record in the system, so that by clicking on an Activity tab you can get an overview of the history of a specific lab result record. The Activity tab only stores one entry per day and it will reflect the last activity to a record for each day that there was activity to track.



Please note that the Lab results entry form does accept ASCII inputs for **α**, **β**, **<**, etc. You may verify the relevant ASCII codes in any word processing program. For example in MS-Word you could look under Insert -- Symbol --- subset Basic Greek. You could simply use the copy/paste operation.



*Standard urine test and EPO urine test are usually reported at different times. How should I report in ADAMS?*

*If Standard urine test and EPO and IRMS results are available at the same time then the findings can be reported into ADAMS all at once (both EPO and IRMS checkboxes can be ticked - they are not mutually exclusive).*

*If reporting the findings separately, e.g. standard results first and EPO and/or IRMS later, then choose Partially Submitted until all data is in. It is recommended that the Laboratory includes the reason for the partially submitted data in the test reason field (e.g. awaiting EPO test results to be reported at a later date). When 'Partially submitted' and Saved, the RMA in question gets an automatic notification upon the result matching with the DCF. In second instance, after the match, when you would like to modify the result for the EPO-result, simply use the Edit-button and add the EPO-result. Set the status to 'Submitted' and Save. Again the RMA gets automatically notified.*



*Where do I provide comments on the result in ADAMS?*

- *Analysis details/Explanation/Opinion*

*Any specific details on the analysis activities. Examples include the ISO methods utilized, integrity statement etc. It is a free text box to allow flexibility for the labs to enter additional and perhaps unique data required by their clients on the sample or general comments on the analysis. This comment is also printed on the Test Result Report. One Example below:*

Analysis Details / Explanation / Opinion  
Détails de l'analyse / Explication / Opinion:  
-The sample was correctly sealed  
- The sample was analyzed using validated methods. (ANAL-09, ANAL-12, ANAL-15, ANAL-37, ANAL-35, ANAL-108, ANAL-42, ANAL-97)

- *Details concerning the finding*

*A free text box to allow flexibility for the labs to enter additional analysis details for e.g. each AAF (especially in cases of multiple findings). This can include MU details, statements about metabolites and possibilities of administrations, for IRMS can include the specific analyte (ERC, A, E, etc) findings, etc. This comment is not part of the Test Result Report.*



*When printing or creating a pdf, even when we reduce the format of the page to 80%, the right side of the page does not appear?*

*If you select the “Page Setup” option from the Internet Explorer “File” menu, it will open a window where you can define your left and right margins (in the “Margins” section). It is preferable to set your margins 10 millimetres. This should avoid truncation of the right part of the page; otherwise you may need to change the settings of your printer.*

### 2.3 EXAMPLE OF ENTERING AN AAF

cancel
save
Auto-Complete

**Sample Code\***  
12345678

**Lab Reference #**  
XXX01

**Mission Order**  
M-12345678

**Sample Collection Date**  
[calendar icon]

**Sample Type\***  
Urine

**Sample A/B**  
Sample A

**Country**  
[dropdown]

**Region**  
[dropdown]

**City**  
[text]

**Specific gravity**  
1.025

**pH**  
6.5

**Screen T/E Ratio**  
1.1

**Date Received by Lab\***  
16-Oct-2008 [calendar icon]

**Date Results Reported**  
28-Oct-2008 [calendar icon]

**Analysis Date and Time**  
[calendar icon]

**Creator**  
WADA-AMA - World Anti-Doping Ag

**Lab**  
LAB-Montreal-CAN-INRS - Laborat

**Result Management Authority\***  
FITA - International Archery Feder

**Send Notification of Results to :**  
WADA-AMA - World Anti-Doping Ag  
FITA - International Archery Feder

remove

**Test type\***  
 In competition  
 Out of competition

**Sport\***  
Archery | Archery

**Competition name**  
World Championships

**Gender**  
Male

**Status\***  
Not Submitted

**Status Reason \***  
New record

**Test Result\***  
AAF

**Test Result Reason**  
[dropdown]

Example of 2 AAF's

**Analysis Results**

EPO  GC/C/IRMS  OTHER

**Analysis Details/Explanation/Opinion**  
The sample above was analyzed using methods XX, YY, ZZ, AA, and BB.

**Analytical Finding**

Class: S1A. Exogenous AAS

Date Results Reported: 28-Oct-2008

| Metabolite             | Estimated | Concentration/Ratio |
|------------------------|-----------|---------------------|
| 6β-hydroxymetandienone | [text]    | [dropdown]          |
| Epimetandienone        | [text]    | [dropdown]          |
| Epimetendiol           | [text]    | [dropdown]          |

add metabolite

Substance: [dropdown] Estimated: [text]

**Details concerning Finding**  
The findings above are consistent with the administration of the prohibited substance metandienone.

Example of multiple metabolites (no parent)

Class: S8. Cannabinoids

Date Results Reported: 28-Oct-2008

Substance: THC (11-nor-9-carboxy-delta9-tetrahydroca)

Estimated: 45 ng/mL

**Details concerning Finding**  
The analysis of the sample identified above by the Laboratory methods has shown the presence of THC metabolite at a concentration of 45 ng/mL. The expanded uncertainty (U; k = 2) is 4.5 ng/mL. The threshold for Carboxy-THC is 15 ng/mL.

add substance

Example of threshold substance

cancel
save
🔄

## 2.4 EDITING A LAB RESULT

1. Search for the lab result you wish to edit. (Refer to the Searching section above).
2. Select the relevant lab result.
3. Click on the **Edit** button. The Lab result page will reload in Edit Mode.
4. Make any changes. If you change the Test Result or Status, fill in the reason for the change in their respective text boxes. Note that all submitted results are part of the permanent ADAMS record. The functionality exists to edit any submitted result but all edits will be recorded with an audit trail (i.e. data cannot be deleted, but may be updated). The **Activities** tab records and displays all changes, when and by whom.
5. Click on the **Save** button to post the edited result.



*What information in my result record is still editable even after my submission?*

Unless the status of the record is 'Cancelled', it is always possible to modify or correct data.

Once the lab result is (partially) *submitted* by the lab, everything in the lab result is still editable by the lab until the lab result gets matched with a DCF that exists in ADAMS with the same sample code/type.

Once *submitted and matched*, the lab result record is partially locked, only allowing more details to be added, yet not to remove or to modify existing data. If you click the *Edit*-button on the top of the page you will find that particular fields are open to input. To be precise, the following additions are possible in that case:

- o If "specific gravity" / "PH" / "Screen T/E Ratio" fields for a urine sample do not have a value, it is possible to set one. Then they are locked.

- New substance can be added;
- New metabolite can be added;
- New monitored substances can be added;
- Add an analysis (but not remove);
- New screening results can be added;
- IRMS checkboxes can be changed;
- New activities can be added;
- "Send results to: " list of organization is not locked. So the user can add/remove organisations into this list, even if matched (warning messages are displayed on submission).

#### AND

In the case the result was ***Partially submitted*** and matched ALSO:

- Analysis details/Explanation/opinion is Editable
- Details concerning finding is Editable



When the result status changes from Partially Submitted to Submitted these comments are included in the Activity entry created in the Activities tab

If there is a need to modify/remove *existing* details, then the relevant RMA for your sample has to be contacted. The RMA is in the position to 'break' the match (the RMA actually should go to the DCF of the athlete, clicking on the Result at the bottom of the page, click on No –Reject Match). Hereafter you as a lab will be able to apply the adjustments in the result record, Save and re-submit it.

## **2.5 CORRECTING A LAB RESULT**

The Correct-function is for exceptional edit operations which are usually not possible under normal circumstances.

1. Search/select the lab result you wish to Correct. (Refer to the Searching section above).
2. Click on the **Correct** button on top of the Lab results page.



HELP contact data privacy TESTLAB User?\_LName, TESTLAB User?\_FName

Search for Lab Result  
hm13 find  
new lab result list

Code: hm13 Type: Urine(A) Ref. No.: Coll. Date: 18-Aug-2009

Lab Results  
Originally created 18-Aug-2009 13:47 GMT, by TESTLAB\_User?\_LName, TESTLAB\_User?\_FName from TESTLAB  
Last updated 18-Aug-2009 13:47 GMT, by TESTLAB\_User?\_LName, TESTLAB\_User?\_FName from TESTLAB

print notify edit correct copy

Sample Code\* hm13 Sample Collection Date 18-Aug-2009 Country  
Lab Reference # Sample Type\* Urine Region  
Mission Order Sample A/B A City

Specific gravity pH Screen T/E Ratio

Date Received by Lab\* 18-Aug-2009 Creator TESTLAB - ADAMS Global Testing L  
Date Results Reported 18-Aug-2009 Lab TESTLAB - ADAMS Global Testing L  
Analysis Date and Time Result Management Authority\* WADA - World Anti-Doping Agency

Send Notification of Results to : WADA - World Anti-Doping Agency

Gender

3. Depending on the status of the result and whether the result has been matched or not with a DCF, a new window pops up offering one or more of the following options to correct data:

- Correct the sample code
- Correct the sample type
- Remove analysis EPO
- Remove analysis OTHER
- Correct Test Type
- Correct Gender
- Correct sport/discipline
- Delete the Lab result

4. Make the correction and provide a mandatory Reason. This reason will be logged.

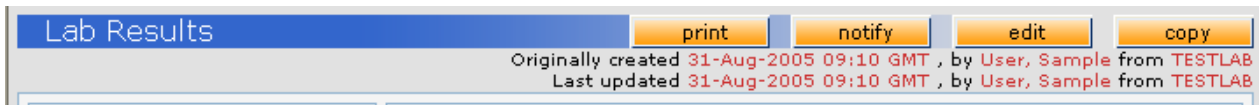
5. Click on the **Save** button.

To obtain the Correct-button you have to make sure that the Corrector-user role is set up in your user account profile [login as the Admin – go to User Account management – search for your username – click on view/edit in the last column of your user account record – go to the tab user account info – under Business role select additionally ‘Corrector’ – save]

## 2.6 COPYING A LAB RESULT

The copy functionality allows you to quickly create a B sample using the data in the A sample.

1. Select the result to be copied
2. Click on Copy



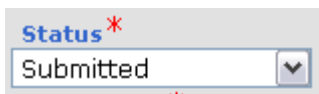
The system copies the following information:

- Sample Code
- Lab Reference number
- Mission Order number
- Sample Collection date
- Sample Type
- Sample A/B
- Country, City, Region
- Specific Gravity
- pH
- Screen T/E ration
- Date received by lab
- Date reported by lab
- Result Management Authority
- TA
- SCA
- Send notification of results to
- Test Type
- Sport
- Gender



## 2.7 POSTING LAB RESULTS

1. A saved Lab result (“Not submitted”) may be edited in order to submit as a complete record.
2. Search for the lab result you wish to post. (Refer to the Searching section above).
3. Select the relevant lab result.
4. Click on the **Edit** button. The page will reload in Edit Mode.
5. Change the status to **Submitted** or **Partially submitted**. The system requires verification of the status change by requiring a “reason for the status change” in the Reason text box below the Status field.



A screenshot of a web form field labeled "Status\*" in blue text. The dropdown menu is open, showing "Submitted" as the selected option. A small red asterisk is visible below the dropdown.

6. Click on the **Save** button.

It is important to note that once a lab result has been posted, by submitting it, no existing data may be changed. Further results data may be added to the record and as well at any time a Negative result may be changed to a Positive result.



**Segregation of functions:** To reflect the SOP (standard of practice) approval procedure within the labs, Release 3.0 introduces the concept of separation of functions: the person that enters the data can be another one that approves and submits the data. The userid of the person who executes the submission (approval) will be stored and printed on the PDF Test report (produced by means of the Print Analysis Result record-button), along with the submission date stamp. This could be considered as the ‘digital signature’ of the Lab’s submission.

The technical configuration of the Access rights to be assigned to different roles can be handled within the *ADAMS Administration* module (functions User Role Management and User Account Management).

**Submission of a lab result does not imply an actual transmission**, but merely that the submission details are **stored** in the database allowing the RMA e.g. to retrieve these details from the database thereafter. Submission triggers an automatic notification to be sent to the RMA, WADA and IF (if not the RMA).



*Once the Laboratory submits an analytical result, what happens at the client RMA's end?*

*When a Lab has submitted an analytical result through ADAMS, an automatic matching process will be activated. To the Lab the name of the athlete is unknown. The Lab only has a sample code/type/sportdiscipline (since Release 3.0) and provides the test result. The DCF at the other end of the Results Management Authority (RMA) contains the sample code/type/sportdiscipline and the name of the athlete. Therefore the sample code/type/sportdiscipline combination is being used as a linking pin to match the test result with the athlete. For all types of results the matching is done automatically. However, for AAF/ATF results the automatic match must be confirmed by the RMA afterwards, whereas for Negative results no intervention of the RMA is required.*

*Upon submission by the Lab the RMA is triggered by an automatic notification. For AAF/ATF results the RMA receives a notification saying that 'a lab result was found positive' and that the 'DCF was automatically matched with a positive lab result'. For Negative results the automatic notification indicates 'a negative lab result has been submitted and matched', specifying the mission order/DCF. The Doping Control Form-link in the notification– when clicked – will direct the RMA-user to the DCF details, whereas the Lab Result-link gives access to the result details.*

*At any time the RMA can retrieve the DCF by searching for the athlete (use Search or Advanced Search) and select the related DCF from the athlete tree.*



*Can ADAMS provide evidence that I have submitted my analytical results?*

*When the lab enters results data on the Lab-Results page in ADAMS nothing is actually being "transmitted" to the ADO. The process is that the lab enters all data on the page, sets the status to Submitted and then presses the Save-button. Saving the data implies that all entered data is being stored in the ADAMS database. The information is retrievable to all users with the appropriate rights,*

including the Result Management Authority (RMA). This means that the data whenever it will be retrieved from the ADAMS database, will be exactly the same as it was originally being incorporated. Consequently, the Lab-Results page is viewed by the RMA exactly as entered. The evidence that the lab has submitted this data is present in ADAMS:

(1). Under the Activities tab on the Lab-Results page automatically an acknowledgement entry will be generated by ADAMS each time the status of the results record changes. In particular, when the status is set to 'Submitted' the Lab's authorized ADAMS user-id is stamped as an electronic signature on the activity record, including date/time stamp. The activity contains a link that when clicked has further details including a text message.

(2). When the Lab submits the results - viz. selects Submitted as status and presses the Save-button – automatically a notification will be sent to the authorized RMA noted in the result (also to WADA and the relevant IF in case of an AAF). There is no need for a transmission confirmation because the result is permanently held in ADAMS and the notification directs the RMA to the ADAMS sample result record at the time that the RMA logs onto ADAMS. In addition, the lab will find in their Sent box in the Message Centre on the ADAMS homepage, the evidence that the notification was sent and that the analysis results were successfully submitted. This text will appear in the message-body of the notification. A reference link to the specific lab result record is also incorporated. From the Recipients section it can be observed whether the recipient (e.g. RMA) has Read the notification or not (Read or Unread status).

(3). From the Lab Results Report it is possible to produce an overview of all Submitted results with the Date Results reported and the lab's name. More fields can be included if desired. If the Submitted status is entered under the filter field 'Status' all submitted results will be returned with the desired relevant data such as Date Results reported. This report can be printed.

(4). Using the Print analysis result record-button generates a PDF-document stating all submission details of the Analysis result, including the test result such as 'submitted' (or not submitted etc.) and the sample code. Also, de facto are stated 'Lab results status' (submitted/ not submitted, etc.), 'submitted by' (user name & Lab name), 'submitted on' (date), 'modified on' (date), 'printed on' (date), 'printed by' (date).

## 2.8 AUTOMATIC NOTIFICATIONS

There are 3 types of notifications related to the submission of lab results which are typically being configured by RMA users:

### 1). *Lab Result Notification:*

If the Lab submits the results, receivers are the users of the Lab, WADA, Result Management Authority as configured in the result, any other organisation as indicated in the 'Send notification of results to:'. Users of the receiving organisation must have selected the notification type 'Lab Result Notification' under their account profile.

### 2). *DCF Notification:*

If a Lab result with status AAF/ATF is submitted and becomes matched after the submission, an automatic notification will be sent to WADA, RMA (in the Lab result and DCF), the IF handling the sport (only for AAF), other organisations as selected by the Lab.

### 3). *Negative Lab Result:*

If a Lab result with status Negative is submitted and becomes matched with a DCF after the submission, an automatic notification will be sent to WADA (if WADA is the Test authority in the DCF) and the RMA (in the Lab result and DCF). Users of the receiving organisation must have selected the notification type 'Negative lab result Notification' under their account profile.


Since ADAMS 3.0 a new notification type has been created:

### 4). *When an ATF Result becomes Negative:*




The notification type is: "ATF becomes Negative Lab Result Notification". A notification will be sent to the users who have this notification type enabled, when a lab changes the Lab Result from ATF to Negative. The body of the notification is:

**ATF of sample [sample type - sample code] has been changed and submitted to be Negative by [Laboratory]**

 Why do I receive a 'Warning' notification such as "The message fails to be sent to the next organizations because they don't have users assigned for this type of notification: Anti-Doping organization X"?

For the Lab result and DCF notification types (1 & 2) the Lab submitting the result receives a warning if the RMA has not defined any user with this notification type configured in his/her user account profile. These warning notifications solely aim at informing you and making you aware that the recipient organization might not have seen your result in ADAMS. In the outbox of the Message Centre all users are listed who are possible receivers of the notification. But if within the RMA there is no user who has these notification types assigned, the warning message will appear. For the Negative Lab result notification type (3) no warnings are sent if no user of the RMA (related to the DCF) has set up this notification type under their account. This is done to avoid unnecessary information-overload.

 When a sample has been collected and the Doping Control Form (DCF) has been entered in ADAMS, will ADAMS send the Laboratory in question a notification automatically?

ADAMS will not send any notification to the Lab when the status of the DCF is set to Complete-Sample collected.

## 2.9 REPORTS & EXPORTING DATA FROM ADAMS

It is possible to *extract* your results data out of the ADAMS database, to compile your statistics or to perform advanced searches on your data. Furthermore, there are provisions in ADAMS to *export* your selected data in different data file-formats (CSV, XML etc.) into your LIMS or into another information system.

1. Go to the **Reports** section on the Homepage
2. Select the *Lab Result Report*, specify an optional Report title and sub-title
3. Choose under the *Desired columns* the columns you would like to see displayed in your report
4. In the *Filter* section you will be able to set filters, e.g. Sample type = Urine, Status = Submitted, and Test results = Negative or Test results = AAF

|  |  |
|--|--|
| <b>Result Management Authority</b><br><input type="button" value="select"/><br><div style="border: 1px solid gray; height: 40px;"></div> | <b>Sample Type</b><br><input type="button" value="select"/><br>Urine   |
| <b>Sample A/B</b><br><input type="radio"/> A<br><input type="radio"/> B<br><input type="radio"/> A/B                                     | <b>Status</b><br><input type="button" value="select"/><br>Submitted  |
| <b>Test Result</b><br><input type="button" value="select"/><br>AAF   | <b>Collection Date</b><br>from <input type="text"/> <input type="button" value="calendar"/><br>to <input type="text"/> <input type="button" value="calendar"/> |

- Under *Format* select the report format in which the generated output of your extraction needs to appear (Grid is default).

**Lab Result Report Selection**

Unlimited report

|   |   |
|---|---|
| <b>Report group</b><br>Sample Lab Report <input type="button" value="+"/><br><b>Public Access</b><br><input type="checkbox"/>   | <b>Report title</b><br>All fields<br><b>Report sub-title</b><br><div style="border: 1px solid gray; height: 20px;"></div> |
| <b>Desired columns</b> <input type="button" value="select"/>  |   |
| <div style="border: 1px solid gray; padding: 2px;">           ADAMS Mission Code<br/>           Analysis Date<br/>           Analysis Details/Explanation/Opinion<br/>           Analysis Time<br/>           Collection Date<br/>           Country         </div> | <b>Sort order</b><br><input type="button" value="Format"/>  |
|   | <div style="border: 1px solid gray; padding: 2px;">           .....<br/>           Comma separated value         </div>   |

In case you would like to **Export** the data into a file, then select the type of file you would like to save your file as (CSV, XML, or PDF). This file you may eventually want to upload into your LIMS or into another information system

6. Check the box *Unlimited report* in the right top corner of the page to make sure that all records are returned (no limit restriction).
7. Click the *View report*-button, to produce the output in the desired format.

### 2.9.1 REUSING REPORT TEMPLATES

Once you have defined parameters for a specific report, you may want to save the report template in order to re-submit the report in the future, without having to enter the parameters again. The report template contains all the parameters used in the report: columns and filters, sort and grouping criteria, report type and title, etc. You can also save and share report templates with other ADAMS users.

To manage saved report, you must first create report groups. A report group is similar to a file folder on your computer. Each report type may contain its own set of report groups.

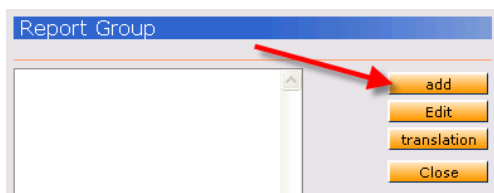
#### 2.9.1.1 Creating a Report Group

To **create** a new report group:

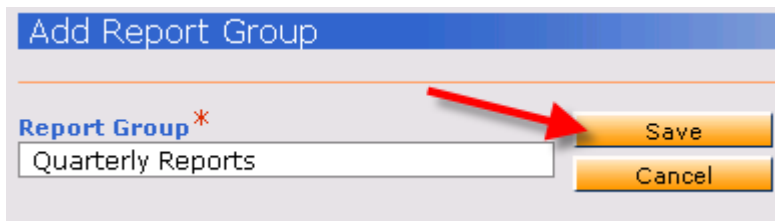
- click the + button next to the report group drop-down box:



- in the Report Group pop-up, click the **add** button:



- In the **Add Report Group** dialog, enter a report group name and click **Save**:



### 2.9.1.2 Saving Report Templates

To save a report template, you must first select a report group where the report template will be saved, then click the **Save as** button. The report template will be saved in that report group, under the name entered in the Report title field. Once the report is saved, a confirmation message will be displayed:

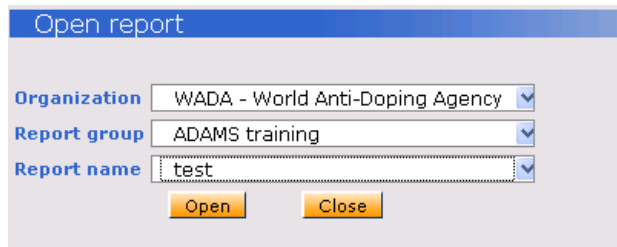


If you click the **Public Access** checkbox when you save a report, then the report template – **not** the report data contents – will be made available to **all other ADAMS users** (including users outside your organization) who have access to the same report type. The **report group** where a public report is saved will also be viewable by the same ADAMS users. Other report groups, and other non-public reports, are not visible by other ADAMS users.



### 2.9.1.3 Opening a Saved Report

To open a saved report template, click the **Open** button. In the **Open report** pop-up, select an organization, report group and report name in each of the corresponding drop-down boxes, then click the **Open** button.

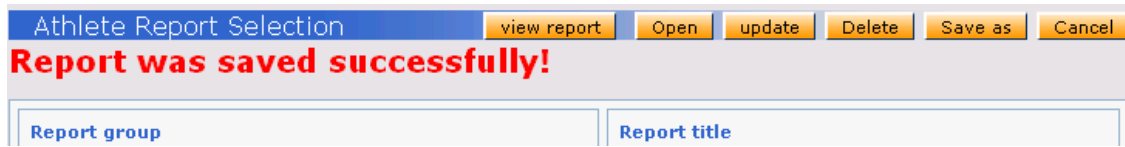


The report template will be displayed in the report screen.

### 2.9.1.4 Updating a Saved Report

To update a report template, open an existing template, make modifications to its parameters, then click the **update** button.

Once the report is saved, a confirmation message will be displayed:



### 3 ATYPICAL FINDINGS (ATF)

An atypical finding (ATF) is reported by a laboratory through a lab result to indicate that, while there may not be an adverse analytical finding, there may be some suspicion according to the results and that further analysis or investigation should be conducted.

Like the AAF, the ATF is a temporary step in the management of a Lab Result. The support of the ATF in ADAMS is very similar to the AAF. These two entities mostly differ by their status and permit organizations to take action using pages which are similar.

An ATF record is created when a DCF is matched to a submitted lab result with the test result of ATF. The record is then accessible through the athlete's medical tree under the ATF branch. Since ADAMS creates ATF's automatically they are only available to edit.

Once the further investigation on the ATF is completed, the user may alter the status of the ATF record into a more conclusive one.



### 3.1 SUBMITTING AN ATF

1. Login and Click **New Lab result**

**Search for Lab Result**

Lab Results

|   |   |   |
|---|---|---|
| <b>Sample Code*</b><br><input type="text" value="159637"/>    | <b>Sample Collection Date</b><br><input type="text" value="01-Apr-2008"/> | <b>Country</b><br><input type="text" value="CANADA"/> |
| <b>Lab Reference #</b><br><input type="text" value="REF-02"/> | <b>Sample Type*</b><br><input type="text" value="Urine"/>                 | <b>Region</b><br><input type="text" value="Quebec"/>  |
| <b>Mission Order</b><br><input type="text" value="M-55555"/>  | <b>Sample A/B</b><br><input type="text" value="Sample A"/>                | <b>City</b><br><input type="text" value="Montreal"/>  |

**Specific gravity**    
 **pH**    
 **Screen T/E Ratio**

**Date Received by Lab\***

**Date Results Reported**

**Analysis Date and Time**

**Creator** TESTLAB - ADAMS Global Testing L  
**Lab** TESTLAB - ADAMS Global Testing L  
**Result Management Authority\*** FIBA - International Basketball Fe

**Send Notification of Results to :**

**Test type\***  
 In competition  
 Out of competition

**Sport\***    
**Gender**

**Test Result\***

**Test Result Reason**

**Status\***

For unconfirmed screen T/E ratio only

2. Enter the following information:

- a. Fill in the Sample Code. Enter a Lab reference number and Mission Order number if relevant.
  - b. Enter the sample collection date and the sample type, specify A or B sample.
  - c. Fill in the country, region and city for the sample collection.
  - d. Enter the date the sample was received at the Lab and the Results Management Authority. Optionally the analysis date and time, TA and SCA can be entered.
  - e. Select who should be notified with the results in the **Send results to** box.
  - f. Select the test type – In or Out of Competition.
  - g. Fill in the Sport. This field is populated by searching for the relevant sport from a database. Enter at least three letters from the desired sport name.
  - h. Click on the magnifying glass icon to search.
  - i. Select your Sport/Discipline from the pop up window.
  - j. Select the test result: "ATF".
  - k. Change the status to "Submitted" (provide a reason in Status reason)
3. Add the T/E ratio information:
- a. Select any relevant Analysis type you performed (in case of GC/C/IRMS indicate the conclusion)
  - b. Click **Add Substance**
  - c. Select the following:
    - i. Substance class: S1B. Endogenous AAS
    - ii. Substance:
      1. Choose "T/E ratio > 4" to report T/E ratio values; enter the determined T/E ratio and select X:1 as measure
      2. Choose "testosterone" to report elevated testosterone values; enter the relevant value and measure.
  - d. Under Analysis Details/Explanation/Opinion indicate any additional details as per the ISL
  - e. Enter the Date reported
  - f. Save

### 3.2 EDITING AN ATF RESULT

1. Search/select the ATF lab result you wish to edit.

2. Click on the **Edit** button.

*Note:* also see section 3.2 *Editing a Lab result*. If the ATF-record has the (partially) Submitted status and was matched to a corresponding DCF entered in ADAMS, then the lab result record is partially locked, only allowing more details to be added, yet not to remove or to modify existing data. If you would like to open up (unlock) all fields, then contact the concerned Results Management Authority (RMA) with the request to break the match.

3. Make any changes.

If you want to finalize any further investigation done and indicate its outcomes, change the **Test Result** and fill in the reason for the change in the intended text box. (This can be done without the requirement of breaking the match by the RMA).

- Test result ATF → Negative
- Test result ATF → AAF



The **Test Result Reason** becomes mandatory in these cases. An Activity entry will automatically be created in the **Activities** tab recording the changes (when/who) and the Test result reason. A notification will be sent to the RMA indicating the ATF change (in both cases Negative/AAF).

4. Set the **Status** and click on the **Save** button to post the edited result.

- If the Test result ATF was changed into → *Negative*:

A new Negative result is created with the same data as in the original ATF (e.g. sample code, type etc). The original ATF result will be retained and the status automatically set to Complete-investigation Negative (there is a link to the new Negative result)

- If the Test result ATF was changed into → *AAF*:

A new AAF result is created with the same data as in the original ATF (e.g. sample code, type etc). The original ATF result will be retained and the status automatically set to Complete-investigation AAF (there is a link to the new AAF result)

(N.B.: For the athlete in question the view will also change: ADAMS will automatically update the status of the ATF record on the athlete to the appropriate status:

Complete – Investigation Negative

Complete – Investigation AAF

If the lab result becomes an AAF, not only will the ATF status be updated, but an AAF record will also be created automatically. The resulting AAF will not be displayed to the athlete when (s)he logs in, regardless of what was ticked in the ATF. The *My Recent Test* page will therefore change from ATF to No results until the Display To Athlete checkbox is also ticked in the AAF.)

### 3.3 EXAMPLE OF AN ATF

cancel   save   Auto-Complete

|                                  |  |                          |
|----------------------------------|--|--------------------------|
| <b>Sample Code*</b><br>159637    | <b>Sample Collection Date</b><br>01-Apr-2008 | <b>Country</b><br>CANADA |
| <b>Lab Reference #</b><br>REF-02 | <b>Sample Type*</b><br>Urine                 | <b>Region</b><br>Quebec  |
| <b>Mission Order</b><br>M-55555  | <b>Sample A/B</b><br>Sample A                | <b>City</b><br>Montreal  |

|                           |           |                  |
|---------------------------|-----------|------------------|
| Specific gravity<br>1.010 | pH<br>6.0 | Screen T/E Ratio |
|---------------------------|-----------|------------------|

|  |   |  |
|--|---|--|
| <b>Date Received by Lab*</b><br>03-Apr-2008        | <b>Creator</b><br>TESTLAB - ADAMS Global Testing L                        | <b>Send Notification of Results to :</b> |
| <b>Date Results Reported</b><br>10-Apr-2008        | <b>Lab</b><br>TESTLAB - ADAMS Global Testing L                            |  |
| <b>Analysis Date and Time</b><br>03-Apr-2008 15:00 | <b>Result Management Authority*</b><br>FIBA - International Basketball Fe |  |

remove

|  |  |                       |
|--|--|-----------------------|
| <b>Test type*</b><br><input checked="" type="radio"/> In competition<br><input type="radio"/> Out of competition | <b>Sport*</b><br>Basketball   Basketball | <b>Gender</b><br>Male |
|--|--|-----------------------|

**Test Result\***  
ATF

**Test Result Reason**

**Status\***  
Submitted

**Status Reason\***  
New record

|                  |                      |                         |
|------------------|----------------------|-------------------------|
| Analysis Results | Monitored Substances | Blood Screening Results |
|------------------|----------------------|-------------------------|

EPO  
  GC/C/IRMS  
  OTHER

**Analysis Details/Explanation/Opinion**  
 IRMS details

**Adverse Analytical Finding(s)**

|                                     |   |
|-------------------------------------|---|
| <b>Class</b><br>S1B. Endogenous AAS | <b>Substance</b><br>testosterone            |
| <b>Estimated</b><br>4.2 X:1         | <b>Date Results Reported</b><br>03-Apr-2008 |

add metabolite

**Details concerning Finding**

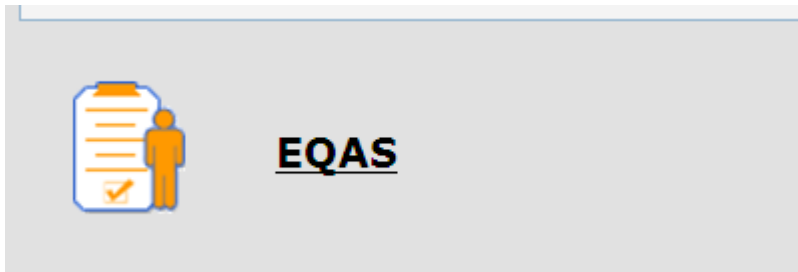
add substance

cancel   save

#### 4 EQAS (FORMERLY PROFICIENCY TESTING)

It is possible for lab users to enter the results of EQAS tests into ADAMS. Submitting these results via ADAMS will allow WADA to immediately receive the data as well as report on its results.

A new link has been added on the myZone page of lab users to access the EQAS tests of that organization.



The EQAS test page is similar to the lab result except that a few fields are not editable:

- Sample Collection Date
- Country, region, city
- Creator
- Lab
- Results management authority (always WADA)
- Send notification of results to:
- Test Type (always In competition)
- Analysis Date and Time
- tab Monitored substances



The following fields are required:

- Sample Code (verification of uniqueness per lab)
- Sample Type
- PT No. (chosen from a list of numbers)
- pH



- Specific Gravity
  - Screen T/E ratio
  - Date Received by Lab
  - Sport/discipline
  - Test Result
  - Status
  - Quantitative results (if applicable for the selected substance)
- 
- Once the results have at least the partially submitted status, WADA users with rights to manage EQAS tests will then be able view the results and run reports on them.

Proficiency Tests cancel save

**Sample Code\***  
**Lab Reference #**  
**PT No.\***

**Sample Collection Date**  
**Sample Type\***  
 Urine  
**Sample A/B**  
 Sample A

**Country**  
**Region**  
**City**

Specific gravity    pH    Screen T/E Ratio

**Date Received by Lab\***  
**Date Results Reported**  
 02-Oct-2007

**Creator**  
 WADA - World Anti-Doping Agency  
**Lab**  
 WADA - World Anti-Doping Agency  
**Result Management Authority\***  
 WADA - World Anti-Doping Agency

**Send Notification of Results to :**

**Test type\***  
 In competition  
**Sport\***  
**Gender**  
 X(Unknown)

**Test Result\***  
 Negative  
**Test Result Reason**

**Status\***  
 Not Submitted  
**Status Reason\***  
 New record

Laboratory comments

Analysis Results    **Monitored Substances**    **Quantitative Results**    WADA Only Activities

EPO     GC/C/IRMS     OTHER

Analysis Details/Explanation/Opinion

**Adverse Analytical Finding(s)**

**Class**  
 .....  
**Substance**  
 .....

**Limit of detection**  
 .....  
**Date Results Reported**  
 02-Oct-2007

add metabolite

**Details concerning Finding**

add substance

cancel save

#### 4.1 SEARCHING FOR AN EQAS RESULT

1. Go to the 'Search EQAS Result' area.

2. To see all EQAS results accessible by your Laboratory click on the **List** button.
3. To search for a specific EQAS result from the list there are several types of criteria you can use to search by, as listed below. These criteria get entered in the **Search EQAS Results** field. Enter your search criteria and click on the **Find** button. This text is not case-sensitive:

- a. Sample Code
- b. EQAS number
- c. Lab Ref. No

In the returned results the Sample Type and Received Date will also be shown. Clicking one of the column names will sort the results accordingly.

4. Select the EQAS result by clicking on any of the links in the list.

#### 4.2 ENTERING AN EQAS RESULT

1. Click on **New EQAS** in the search area

**Search EQAS**

2. The EQAS results page will appear

cancel    save

### Proficiency Tests

**Sample Code\*** Step 4

**Lab Reference #** Step 6

**PT No.\*** Step 3

**Sample Collection Date**

**Sample Type\***  
Urine

**Sample A/B**  
Sample A Step 5

**Country**

**Region**

**City**

**Specific gravity**

**pH** Step 7

**Screen T/E Ratio**

**Date Received by Lab\*** Step 8a

**Date Results Reported**  
02-Oct-2008

**Analysis Date and Time**

**Creator**  
WADA - World Anti-Doping Agency

**Lab**  
LAB-Montreal-CAD-INRS - Laborat

**Result Management Authority\***  
WADA - World Anti-Doping Agency

**Send Notification of Results to :**

**Test type\***  
In competition

**Sport\*** Step 8b

**Competition name**

**Gender**  
X(Unknown) Step 8c

**Status\***  
Not Submitted Step 14

**Status Reason \***  
New record

**Test Result\*** Step 13  
Negative

**Test Result Reason**

**Laboratory comments** Step 9

Step 10

Analysis Results
Monitored Substances
Quantitative Results
WADA Only Activities

EPO    GC/C/IRMS    OTHER Step 12

**Analysis Details/Explanation/Opinion**

**Analytical Finding**

**Class**      **Date Results Reported**  
.....      02-Oct-2008

**Metabolite**      **Limit of detection**      **Concentration/Ratio**  
.....      .....      .....

add metabolite

**Substance**      **Limit of detection**  
.....      .....

**Details concerning Finding**

add substance Step 11

**Steroid Parameters**

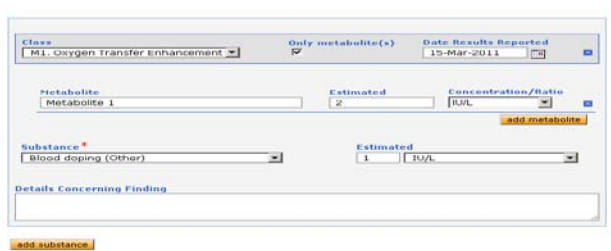
|                               |       |       |
|-------------------------------|-------|-------|
| 5 $\alpha$ -androstanediol    | ..... | ng/mL |
| 5 $\beta$ -androstanediol     | ..... | ng/mL |
| androsterone                  | ..... | ng/mL |
| dehydroepiandrosterone (DHEA) | ..... | ng/mL |
| epitestosterone               | ..... | ng/mL |
| etiocholanolone               | ..... | ng/mL |
| testosterone                  | ..... | ng/mL |

cancel    save

3. Enter **PT number**: this is at all times a mandatory field
4. Enter the **Sample code** (mandatory at all times). The system will automatically check on duplicate sample codes (per PT number per Lab)
5. Verify the **Sample type** (mandatory at all times) and **Sample A/B** fields
6. Enter a **Lab Reference #** if desired (e.g. Lab's internal sample code)
7. Complete the *mandatory* **Specific gravity** (4 significant digits), **pH** (2 significant digits) and **Screen T/E ratio** (3 significant digits)
8. Fill in:
  - a. the **Date** the Samples were **received** by your laboratory
  - b. **Sport/discipline**
  - c. Any other information: **Gender**; (**Test type** is by default In-competition);
9. To add a metabolite and/or prohibited substance click on the **Add Substance** button, and select the required Class. *The substance is mandatory* when a substance class is selected. Click on the **Add Metabolite** to detail possible associated metabolite(s), and enter the appropriate information. If more than one prohibited substance and/or metabolite is to be reported, then click on the **Add Substance** and/or **Add Metabolite** button to detail each finding.



The **Only metabolite(s)** checkbox can be checked to indicate that only metabolite(s) were detected during the analysis (not the parent). This will be explicitly reflected as such and clearly stated in the pdf Test report (produced by dint of the *Print analysis result record- button*). When the box is checked, at least one metabolite in combination with a substance/class has to be specified at the time of (partial) Submission.



The screenshot shows a software interface with the following fields and controls:

- Class:** M1. Oxygen Transfer Enhancement
- Only metabolite(s):**
- Date Results Reported:** 15-Mar-2011
- Metabolite:** Metabolite 1
- Estimated:** 2
- Concentration/Ratio:** R/L
- add.metabolite** button
- Substance\*:** Blood doping (Other)
- Estimated:** 1
- Concentration/Ratio:** R/L
- add.substance** button
- Details Concerning Finding:** (empty text area)

10. If a specific so-called **Threshold substance** (e.g. "epitestosterone > DL of 240 ng/mL") is selected when Adding a substance in the previous step, then automatically a new section for **Quantitative Results** appears, which may be completed:



Data must include Mean value (with units), the Combined standard uncertainty details, triplicate sample results (with units), the Standard Deviation (SD), and Details concerning finding – if any.

|                     |                           |                              |
|---------------------|---------------------------|------------------------------|
| <b>Class</b>        | <b>Only metabolite(s)</b> | <b>Date Results Reported</b> |
| S1B. Endogenous AAS | <input type="checkbox"/>  | 20-Jul-2011                  |

**add metabolite**

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>Substance*</b>                 | <b>Limit of detection</b> |
| epitestosterone > DL of 240 ng/mL | .....                     |

The mean concentration measured is  .....

The combined standard uncertainty (uc) estimated by the Laboratory at the threshold is +/-  .....

**Quantitative Results**

|                  |                      |       |
|------------------|----------------------|-------|
| <b>Aliquot 1</b> | <input type="text"/> | ..... |
| <b>Aliquot 2</b> | <input type="text"/> | ..... |
| <b>Aliquot 3</b> | <input type="text"/> | ..... |

**Standard deviation**  .....

**Details Concerning Finding**

**add substance**

11. Enter the **Steroid Profile Variables**

The list contains the following steroids: androsterone, etiocholanolone, testosterone, epitestosterone, 5 $\alpha$ -androstenediol, 5 $\beta$ -androstenediol. Fill in the estimated concentrations and units for each of the measured analytes from the Initial Testing Procedure.

12. Laboratory **Test result** value:

- a. Negative: The analysis did not reveal the presence of a prohibited substance or T/E ratio greater than four.
- b. AAF: Adverse Analytical Finding. A prohibited substance or metabolite or marker was found
- c. ATF: Atypical Finding. Substances for which further investigation is needed (e.g. TE greater than 4 without a GC/C/IRMS result indicating an exogenous source)
- d. Not analyzed

13. Change the lab result **Status**:

- a. *Not submitted*: This means that the result can be saved in ADAMS, but is not yet available to WADA. E.g. in case you would like to have the option of printing and verifying the analysis record before submitting. *Mandatory fields can be left blank when saving, except for PT number field, sample code/type.*
- b. *Submitted*: Once all analyses are complete and result is ready to be submitted to WADA. All mandatory fields need to be filled out.
- c. *Partially Submitted*: For your EQAS-reporting this status is not directly relevant. However, once you have submitted your EQAS-results, it will not be possible to modify the details, unless WADA upon request unlocks the record by resetting the status to 'Partially submitted'. In the status 'Partially submitted' everything is still editable.
- d. *Cancelled*: nothing can be changed (only Activities can be added/modified)

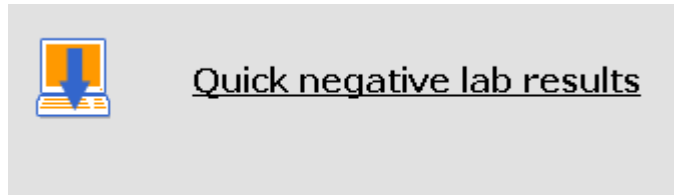
14. If you are ready to record the result into ADAMS, DO NOT FORGET to click on the **Save** button.

15. Before a status is changed to *Submitted*, verify that the entered information is correct, i.e. one way to do this is to use the **Print Analysis Results Record** button to review a hardcopy prior to submission.

16. If desired, use the **Print**-button to create a hardcopy of the EQAS result record (page being displayed, related data in the database including data under the Tabs). It is recommended to print in View-mode and not the Edit-mode.

17. Once an EQAS-result is *Saved with the Submitted* status, the record will be locked for modification. If a change is necessary after submission, WADA has to be contacted in order to allow (change the status of an EQAS-result back to Partially Submitted) a Lab-user (not WADA!) to edit and re-submit the record.

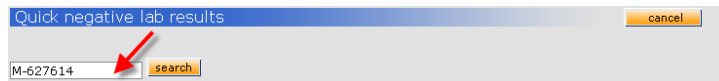
## 5 QUICK NEGATIVE RESULTS



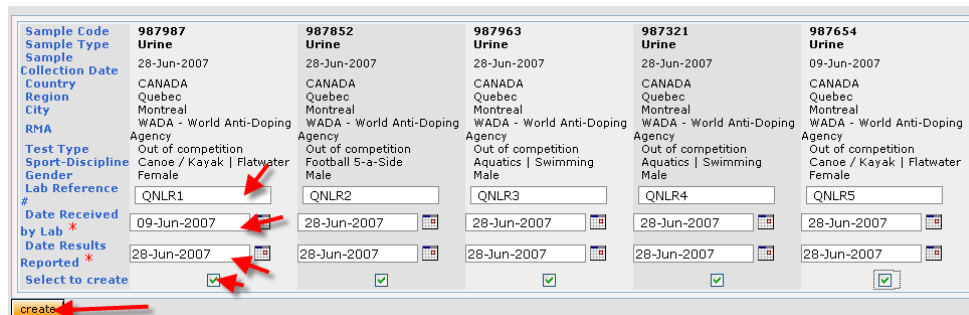
This functionality permits to a Lab User to create/submit very quickly a batch of negative Lab Results, related to the same mission order.

### 5.1 ENTERING QUICK LAB RESULTS

1. Login as a lab user
2. Select **Quick negative lab results**
3. Enter the exact Mission Order number and click search [Pre-requisite: the MO and the DCF with status Complete-sample collected must exist in ADAMS]



4. The system will search for all DCF's linked to the MO, filtering the samples not already matched and will display pre-filled forms for each of these samples
5. Complete the fields:
  - a. Lab reference number (not mandatory)
  - b. Date received by lab (mandatory)
  - c. Date results reported (mandatory, defaults to today)
  - d. Select the ones you would like to create



| Sample Code             | 987987                              | 987852                              | 987963                              | 987321                              | 987654                              |
|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Sample Type             | Urine                               | Urine                               | Urine                               | Urine                               | Urine                               |
| Collection Date         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 09-Jun-2007                         |
| Country                 | CANADA                              | CANADA                              | CANADA                              | CANADA                              | CANADA                              |
| Region                  | Quebec                              | Quebec                              | Quebec                              | Quebec                              | Quebec                              |
| City                    | Montreal                            | Montreal                            | Montreal                            | Montreal                            | Montreal                            |
| RMA                     | WADA - World Anti-Doping Agency     | WADA - World Anti-Doping Agency     | WADA - World Anti-Doping Agency     | WADA - World Anti-Doping Agency     | WADA - World Anti-Doping Agency     |
| Test Type               | Out of competition                  | Out of competition                  | Out of competition                  | Out of competition                  | Out of competition                  |
| Sport-Discipline        | Canoe / Kayak   Flatwater           | Football 5-a-Side                   | Aquatics   Swimming                 | Aquatics   Swimming                 | Canoe / Kayak   Flatwater           |
| Gender                  | Female                              | Male                                | Male                                | Male                                | Female                              |
| Lab Reference #         | QNLR1                               | QNLR2                               | QNLR3                               | QNLR4                               | QNLR5                               |
| Date Received by Lab *  | 09-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         |
| Date Results Reported * | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         | 28-Jun-2007                         |
| Select to create        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

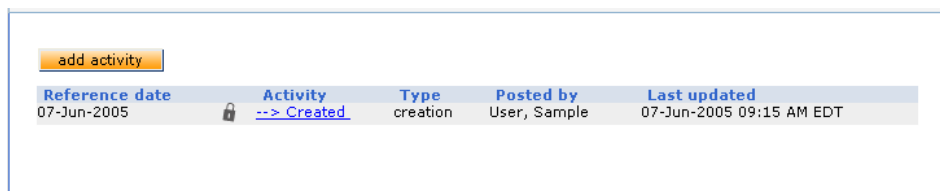
6. Click **Create**

The system will create the negative lab results, submit them and display a confirmation.

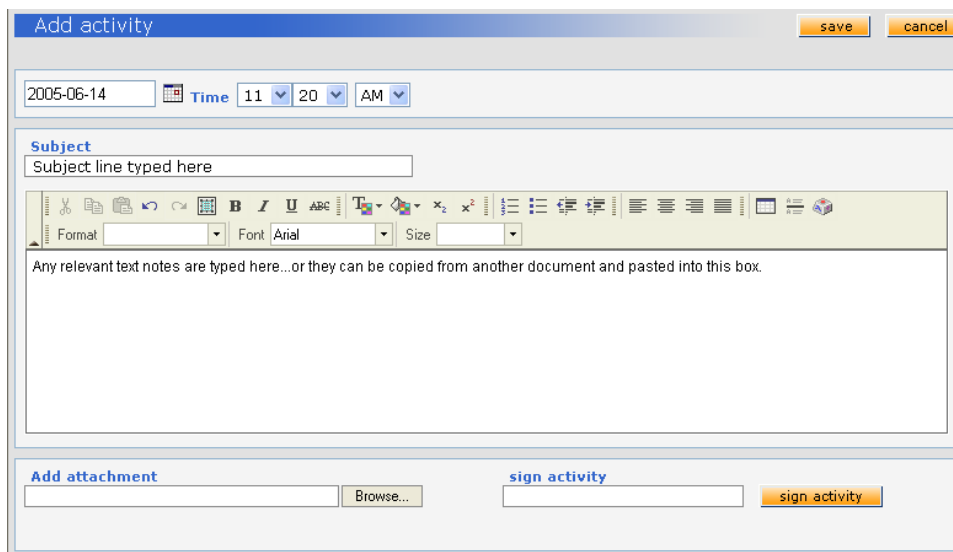
## 6 ATTACHING DOCUMENTS WITHIN ADAMS

Within ADAMS you may have a requirement to attach documents or files. This is done from the Activities tab once you have initially saved a lab result.

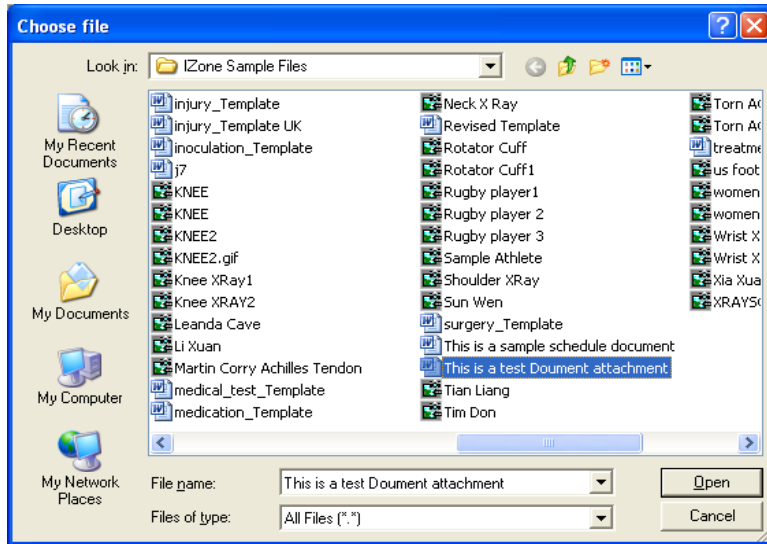
The Activities tab will automatically be populated with entries recording creation and editing of the related record. To add an attachment within the Activities tab, click on the **add activity** button.



Clicking the New Activity button generates the Add Activity window. Here you enter a Reference date, create a Subject or title, enter any notes or comments relevant and then to add a file or document click on the **Add attachment** button.





When you click the **Add attachment** button, the Choose file window will open. Navigate to and select the file from its location on your hard drive, then click on the **Open** button.



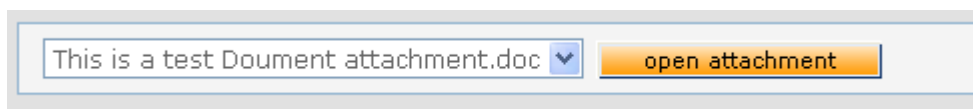
This will place the document's file path in the Add attachment field and when you save the activity it will save a copy of the file or document on the central ADAMS server.

Once saved to the server it will display in the Activity grid and have a paperclip icon to denote the fact there is an attachment loaded.

[add activity](#)

| Reference date | Activity   | Type     | Posted by    | Last updated             |
|----------------|--|----------|--------------|--------------------------|
| 07-Jun-2005    |  <a href="#">Attaching a document</a>       | DCF      | Boyd, Nicola | 07-Jun-2005 10:09 AM EDT |
| 07-Jun-2005    |  <a href="#">--&gt; Created-In Progress</a> | creation | Boyd, Nicola | 07-Jun-2005 09:27 AM EDT |

To view an attachment, simply click on the subject link and then click on the open attachment button and you will be able to view the attached file or document.



## **7 IMPORT OF ANALYTICAL RESULTS (XML AND CSV)**

### **7.1 OVERVIEW**

The purpose of this specification is to describe the initial file format that will be used to electronically transfer analytical findings from WADA-accredited laboratories to the ADAMS system.

The file transfer format described in this document is meant to specify the minimum amount of information that must be provided by a lab to automatically post results against an anti-doping test recorded in ADAMS.

### **7.2 FILE FORMAT**

A standard XML and CSV file format were defined to allow all laboratories to report results in a consistent manner.

### **7.3 TIMING OF SUBMISSION**

ADAMS has been designed to accept analytical finding records (either manually entered or electronically submitted via XML/CSV file transfer) either before or after the relevant doping control form has been entered. The result matching and verification process will only complete after the DCF is entered.

### **7.4 POSTING AND ACKNOWLEDGEMENT OF RESULTS**

After a file containing a batch of results is uploaded, screened, and accepted by ADAMS, ADAMS will display a screen containing a summary of the records uploaded. The user is then expected to review the summary and accept (Post) the results into ADAMS, so that they are made available to all relevant parties.

The user may elect to print this summary screen from the browser as an acknowledgement of the transmission.

| View Lab Result Batch   |                       |                              |                      |                  |                                     |                    |                        |
|---|-----------------------|------------------------------|----------------------|------------------|-------------------------------------|--------------------|------------------------|
| <input type="button" value="print"/> <input type="button" value="close"/> <input type="button" value="Post"/> <input type="button" value="cancel"/> |                       |                              |                      |                  |                                     |                    |                        |
| Lab results were imported successfully  |                       |                              |                      |                  |                                     |                    |                        |
| File name   | Batch ID (XML only)   | File Creation Date(XML only) | Upload Date          | Status           |                                     |                    |                        |
| 01LabCSVImport-LSN.csv  | N/A                   | N/A                          | 01-Sep-2006          | Temporary        |                                     |                    |                        |
| Sample Type   | Sample Code           | Sample A/B                   | Date Received by Lab | Sport Discipline | RMA                                 | In/Out Competition | City                   |
| Urine   | <a href="#">Y-002</a> | A                            | 23-Aug-2006          | Basketball       | WADA - World Anti-Doping Agency     | OUT                | CANADA - Montreal      |
| Urine   | <a href="#">Y-003</a> | A                            | 24-Aug-2006          | Basketball       | WADA - World Anti-Doping Agency     | OUT                | CANADA - Montreal      |
| Urine   | <a href="#">Y-004</a> | A                            | 24-Aug-2006          | Basketball       | TAL - Test Ado With Lab             | OUT                | CANADA - Montreal      |
| Urine   | <a href="#">Y-005</a> | A                            | 25-Aug-2006          | Skiing           | WADA - World Anti-Doping Agency     | IN                 | SWITZERLAND - Lausanne |
| Urine   | <a href="#">Y-006</a> | A                            | 25-Aug-2006          | Skiing           | WADA - World Anti-Doping Agency     | IN                 | SWITZERLAND - Rolle    |
| Urine   | <a href="#">Y-007</a> | A                            | 25-Aug-2006          | Cycling          | UCI - Union Cycliste Internationale | IN                 | SPAIN - Barcelona      |
| Urine   | <a href="#">Y-008</a> | A                            | 26-Aug-2006          | Cycling          | UCI - Union Cycliste Internationale | OUT                | SPAIN - Mandigatua     |
| Urine   | <a href="#">Y-009</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | OUT                | FRANCE - Paris         |
| Blood   | <a href="#">Y-010</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | OUT                | FRANCE - Paris         |
| Urine   | <a href="#">Y-011</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | OUT                | FRANCE - Paris         |
| Urine   | <a href="#">Y-012</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | OUT                | FRANCE - Paris         |
| Urine   | <a href="#">Y-013</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | OUT                | FRANCE - Paris         |
| Urine   | <a href="#">Y-014</a> | A                            | 26-Aug-2006          | Rowing           | WADA - World Anti-Doping Agency     | IN                 | SWITZERLAND - Lausanne |

## 7.5 ERROR HANDLING

ADAMS will carefully screen each record uploaded in a file. If one, or more, records contain a data error, the summary screen will display the error so that it may be corrected and the file re-transmitted. ADAMS will not accept any records from a file which contains an error(s).

- XML-file:** If during the import of the XML file an error occurs in a sample record, the system will list the error providing an explanation and an index indicating the position of the sample in the file (starting from 1). Only a sample record that causes an error will be rejected. The remainder of the file will still be accepted.

- *CSV-file*: The first record of the CSV-file (line 0) is reserved for column titles that should exactly match the prescribed spelling (see tables below). Otherwise errors will be displayed. Error messages pertaining to the content will tell on which line (>0) the value for which column is wrong or missing. Duplication of the sample code (for the same sample type) is checked. Only a sample record that causes an error will be rejected. The remainder of the file will still be accepted.

## 7.6 ANALYTICAL RESULT DATA ELEMENTS

This section will describe each data element that will be transmitted to ADAMS. A sample XML data file can be found in the Appendix. For a sample CSV file or further details on the XML, contact [adams@wada-ama.org](mailto:adams@wada-ama.org)

### 7.6.1 XML SCHEMA

#### **BATCH HEADER INFORMATION**

Each file must contain one batch header containing the following information:

| <b>Data Element</b>      | <b>Description</b>  |
|--------------------------|---|
| File Creation Date       | An ISO representation of the date that the data file was created by the laboratory (e.g. 2005-02-15). This date will be stored in ADAMS as the result posting date.   |
| Transmission Source Name | The name of the organization, department, or possibly individual that is the source of the data transmission. This field is optional, but if provided, it will be stored in the "Observations and Details" area of the result record. |
| Batch ID or Number       | An internal lab number to identify the batch of results contained within the transmission. This identifier will be stored with each result record in ADAMS.   |

|  |   |
|--|---|
| Lab                                    | An identification code indicating the Lab name that is to send the result records.  |
| Result Management Authority            | An identification code indicating the Result Management Authority that is to receive the result records (e.g. WADA, CCES, etc). This field will be stored in ADAMS and will facilitate matching. WADA will provide a list of valid Result Management Authorities and their associated codes to laboratories on a regular basis. |
| Testing Type                           | A code indicating whether the samples were collected in-competition (“IC”) or out-of-competition (“OOC”).   |
| Name of Competition / Training Session | If applicable, the name of the competition or training session at which the sample was collected. This field is not mandatory.  |
| Comments                               | If desired, comments can be provided. This field is not mandatory.  |

### SAMPLE DETAIL RECORDS

One sample detail record, containing the following information, must be provided for each sample analyzed:

\* Identifies mandatory fields

| Data Element        | Description  |
|---------------------|--|
| Sample Code*        | The unique sample code (e.g. test kit identifier). This will be used to match the result record to the test record.                  |
| Lab ID Number (LIN) | An internal number or code assigned to each sample by the lab. This field is not mandatory, but will be stored in ADAMS if provided. |
| Sample Type*        | A code used to identify the type of sample provided (e.g. Blood, Urine)...   |
| Sample A/B*         | “A” or “B” code to indicate whether the result record relates to the analysis of the “A” or the “B” Sample.                          |

|                              |   |
|------------------------------|---|
| Date Sample Collected*       | The sample collection date as recorded on the doping control form. (e.g. 2005-02-12)  |
| Date Sample Received by Lab* | The date that the lab received the sample (e.g. 2005-02-12)   |
| Gender of Athlete*           | A code (M, F, or X) indicating the gender of the athlete as provided on the doping control form. This field is not mandatory.   |
| Sport & Discipline*          | The sport and discipline in which the athlete competes (e.g. AQ ). ADAMS will record the lab entry even though it may not exactly match the sport and discipline recorded on the sample collection order. |
| Event                        | The name of the event (e.g. Men's 100m finals) in which the athlete was competing, as provided on the doping control form.  |
| Country of Sample Collection | A code indicating the country in which the sample was collected.  |
| Region of Sample Collection  | A code indicating the region in which the sample was collected.   |
| City of Sample Collection    | The city where the sample was collected. This is not a mandatory field but may be used to verify a match if provided.   |
| Test authority               | A code indicating the short name of the Test authority.   |
| Sample collection authority  | A code indicating the short name of the Sample collection authority.  |
| Mission order number         | Optional  |
| Competition name             | If applicable, the name of a competition  |
| Screen T/E Ratio             | A number indicating the T/E ratio of the sample. For example, 2.6 would indicate a T/E ratio of 2.6:1. This is not a mandatory field.   |
| pH                           | A value indicating the pH of the sample. This is not a mandatory field; if it is not provided, the implication  |

|                                 |  |
|---------------------------------|--|
|                                 | will be that the pH of the sample is within acceptable limits.   |
| Specific Gravity                | A value indicating the S.G. of the sample. This is not a mandatory field; if it is not provided, the implication will be that the S.G. of the sample is within acceptable limits.  |
| Test Result*                    | A code indicating the test result following the sample analysis (“Negative”, AAF, ATF, “NotAnalyzed”).   |
| Test Result Reason              | This is not a mandatory field.   |
| Date results reported           | Date of reporting the results. This is not a mandatory field.  |
| Analysis Type(s) Performed      | A list of analysis types that were performed on the sample. E.g. “EPO”, “GC/C/IRMS”, “Transfusion”, “HBOCS”, “hGH”, and “Other”. Not mandatory.<br>For “GC/C/IRMS” a conclusion can be provided (consistent or not)  |
| Details                         | A free-text description (Analysis details/Explanation/Opinion) of any relevant observations or analyses performed on the sample (e.g. sample tampering or received in poor condition, sample decomposition detected, unusual odor or color detected, etc.). This field is not mandatory. Please note that any departure from the International Standard for Laboratories must be reported to the Result Management Authority outside of ADAMS, especially if the sample result is an adverse analytical finding. |
| Send notification of results to | A code indicating the short name of the organization the results have to be sent to. Multiple organizations are possible.  |
| Steroid profile variable        | A code and value indicating the name of the variable and the corresponding value. This field is not mandatory.   |
| Prohibited substance            | The code, value and unit of the prohibited substance.  |

|   |   |
|---|---|
| Metabolite only                             | A flag indicating whether merely metabolite(s) are involved                                       |
| Mean concentration/<br>standard uncertainty | If a Threshold substance is concerned, the Mean/<br>Uncertainty values and units can be indicated |

### 7.6.2 CSV FILE

This file specifies the CSV file import format for lab analysis results. It has been designed to be as simple as possible, with only one line per sample and a minimum set of mandatory data per sample. The sequence of the columns is not relevant.

The mandatory fields per sample match the fields required in the ADAMS application. The status of each result record is determined by the user action (e.g. POST) taken immediately following import.

### MANDATORY FIELDS

| Field                | Column header | Description  | Example(s)                       |
|----------------------|---------------|--|----------------------------------|
| Sample Code          | sample_code   | This is the identifying number on the sample collection kit.<br><br>The sample code must be unique in combination with the sample type, the Lab name and the Date received by the Lab. | "1479265"                        |
| Sample Type          | sample_type   | This specifies the type of sample analyzed.  | "URINE"<br><br>"BLOOD"           |
| Date Received by Lab | date_received | This specifies the date that the sample was received by the laboratory (yyyy-MM-dd)  | "2006-01-12"<br><br>"2006-11-28" |

|                  |                 |   |  |
|------------------|-----------------|---|--|
| RMA              | rma             | This field contains the short-name identifier of the Results Management Agency, which is generally the laboratory's customer. A list of all valid short-name codes is available in the download centre on our website <a href="http://www.wada-ama.org/en/ADAMS/ADAMS-Training-and-User-guides">http://www.wada-ama.org/en/ADAMS/ADAMS-Training-and-User-guides</a> | "FIFA"<br>"ISAF"                             |
| Test Type        | test_type       | This field is used to indicate whether the sample was collected in- or out-of-competition   | "IC"<br>"OOC"                                |
| Sport            | sport_code      | This field is used to report the sport of the athlete who contributed the sample. The WADA sport identifier code must be used in this field, not the sport's name. For the codes see the download centre on our website.  | "SK"<br>"AQ"                                 |
| Sport discipline | discipline_code | This sport discipline's specific code. For the codes see the download centre on our website.  | "SK"<br>"AQ"                                 |
| Test result      | test_result     | Negative, NotAnalyzed, ATF, AAF   | "Negative"<br>"NotAnalyzed"<br>"AAF" , "ATF" |

### OPTIONAL FIELDS

| Field                          | Column header      | Description   | Example(s)  |
|--------------------------------|--------------------|---|---|
| Sample A or B                  | sampleAB           | If left blank, then sample A will be assumed.   | "A"<br>"B" , " "  |
| Test Result reason             | test_result_reason | The reason substantiating the result selected.  | "text"  |
| Analysis Details / Explanation | analysis_details   | This field is used to provide any relevant information concerning the analyses performed by the laboratory or specific observations made. | "The samples were analyzed for anabolic and masking agents, |


|                                |                        |  |   |
|--------------------------------|------------------------|--|---|
|                                |                        |  | diuretics, and hCG using methods 1001, 2001, and 6001." |
| Lab Internal Reference Number  | lin                    | This field is used to record the internal sample code assigned to the sample upon receipt by the laboratory.   | "A127692"<br>"A127693"                                  |
| Mission Order Number           | mo_number              | This field is used to record the mission order/sample collection order number (if available).  | "M-127698"  |
| Date of Sample Collection      | sample_collection_date | This field contains the sample collection date (yyyy-MM-dd)  | "2006-01-28"  |
| Date of Analysis Report        | analysis_report_date   | This field contains the date that the sample analysis results were reported to the RMA. (yyyy-MM-dd)   | "2006-04-13"  |
| Country (of Sample Collection) | country                | This field contains the country code of where the sample was collected. It can be provided in either 2-character ISO format or 3-character Olympic format. For the codes see the download centre on our website. | "EE" or "EST"<br>"US" or "USA"                          |
| Region (of Sample Collection)  | region                 | This field contains an ISO code identifying the region within the country of sample collection. For the codes see the download centre on our website.  | "CA-AB"<br>"US-KY"                                      |
| City (of Sample Collection)    | city                   | This field contains the city where the sample was collected.   | "Montreal"<br>"Warsaw"                                  |
| Athlete Gender                 | gender                 | This field specifies the gender of the athlete who provided the sample.  | "M"<br>"F"<br>"X"                                       |
| Screen T/E                     | te_ratio               | This field specifies the T/E ratio analyzed in   | "2.4"   |

|                                 |                    |   |   |
|---------------------------------|--------------------|---|---|
| Ratio                           |                    | the sample. Decimal value with max. 2 digits after the decimal point. Any extra digits will be discarded when saving the results (do not include any other modifier such as ":1").  | "4.62"  |
| pH                              | ph                 | This field specifies the pH analyzed in the sample. Decimal value with max. 2 digits after the decimal point. Any extra digits will be discarded when saving the results.   | "5"<br>"2.4"  |
| Specific gravity                | specific_gravity   | This field specifies the specific gravity analyzed in the sample. Decimal value with max. 4 digits after the decimal point. Any extra digits will be discarded when saving the results.   | "1.003"<br>"2.3612"   |
| Special type of analysis        | analysis_attribute | Default is blank. This field specifies the special type of analysis: for Urine - EPO, GC/C/IRMS or Other . Multiple types are allowed but need to be separated by a ' ' for Blood - hGH, Transfusion, HBOCS, or Other . Multiple types are allowed but need to be separated by a ' '.<br>for Urine - EPO, GC/C/IRMS or Other . Multiple types are allowed but need to be separated by a ' '<br>for Blood - hGH, Transfusion, HBOCS, or Other . Multiple types are allowed but need to be separated by a ' ' | "EPO"<br>"GC/C/IRMS"<br>"Other"<br>"EPO GC/C/IRMS"<br>"hGH Other" |
| GC/C/IRMS conclusion            | irms_consistent    | This field is relevant in case the analysis attribute contains the value GC/C/IRMS .<br>When left empty AND the Sample type is Urine AND the analysis attribute contains the value GC/C/IRMS, then:<br>- If the result is AAF, then irms_consistent is set to 'yes'<br>- If the result is Negative or ATF, the irms_consistent is set to 'no'   | "yes"<br>"no"<br>empty  |
| Send notification of results to | send_result_to     | This field specifies the short name of the organization(s) to be notified of the result. For the codes see the download centre on our website.  | "UCI"<br>"CCES"   |

|                              |  |  |                 |
|------------------------------|--|--|-----------------|
| Name of the competition      | competition_name                             | In case the test_type is 'IC' (in-competition): free text  | "2011 Worldcup" |
| Prohibited substance         | prohibited_substance[index]                  | The specific substance code has to be used. For the codes see the download centre on our website. The index is a number ranging from 1 to 10. <i>A maximum number of 10 prohibited substance columns (and associated prohibited substance value and prohibited substance unit columns) may be included in a file.</i> If a metabolite is included in the file the substance becomes mandatory. | "danazol"       |
| Prohibited substance value   | prohibited_substance_value[index]            | The decimal value of the prohibited substance [index]  | "2.3"           |
| Prohibited substance unit    | prohibited_substance_unit[index]             | The specific code of the unit of measure for analysis related to the prohibited substance[index]   | "IU/L"          |
| Prohibited substance details | prohibited_substance_details[index]          | Free text for the details concerning finding.  | "free text"     |
| Metabolite-only indicator    | prohibited_substance_metabolite_only[index]  | Indicator that signifies whether metabolite(s) only were detected. Default is 'N'. If 'Y' then the substance becomes mandatory.  | "Y"<br>"N"      |
| Metabolite                   | prohibited_substance_metabolite[index]       | Free text for the metabolite. The index is a number ranging from 1 to 10. <i>A maximum number of 10 metabolite columns (and associated metabolite value and metabolite unit columns) may be included in a file.</i>  | "text"          |
| Prohibited substance value   | prohibited_substance_metabolite_value[index] | The decimal value of the metabolite [index]  | "4.15"          |
| Prohibited substance         | prohibited_substance_metabolite              | The specific code of the unit of measure for analysis related to the metabolite[index]   | "IU/L"          |

|                                      |  |   |                |
|--------------------------------------|--|---|----------------|
| unit                                 | _unit[index]                                 |   |                |
| Steroid profile variables            | Steroid_profile_variable_code[index]         | Specific code of the steroid profile variable. Currently, the range of the index is from 1 to 6                               | "androsterone" |
| Steroid profile variables            | Steroid_profile_variable_value[index]        | Decimal value or integer as per ADM2 settings for each variable   | "12"           |
| Threshold substance mean value       | prohibited_substance_mean[index]             | Decimal value of the Mean when a special threshold substance is concerned (max. 5 digits apart from the decimal point)        | "2.1234"       |
| Threshold substance mean unit        | prohibited_substance_mean_unit[index]        | Specific code of the unit of measure  | "IU/L"         |
| Threshold substance uncertainty      | prohibited_substance_uncertainty[index]      | Decimal value of the Uncertainty when a special threshold substance is concerned (max. 5 digits apart from the decimal point) | "3.1234"       |
| Threshold substance uncertainty unit | prohibited_substance_uncertainty_unit[index] | Specific code of the unit of measure  | "IU/L"         |
| Sample Collection Authority          | sca  | Short name of the ADO organization. For the codes see the download centre on our website.                                     | "AIBA"         |
| Test Authority                       | ta   | Short name of the ADO organization. For the codes see the download centre on our website.                                     | "ITTF"         |

**Date format:** Please note that if you are using an older version of Excel, the date format may not be shown as yyyy-MM-dd but as dd/MM/yyyy. You can find out the actual values however by opening your CSV-file in Wordpad. So don't be misled by how it is displayed in Excel.


 *Where do I find the codes to be used in my import-file for the SportDiscipline, Country, Region, Substance and short names of the RMA?*

The codes to use for sport, discipline, country and region are listed in the following file, available on the [WADA Web site: http://www.wada-ama.org/Documents/ADAMS/Training\\_User\\_Guides/ADAMS\\_Codes\\_for\\_Sport\\_Discipline\\_Country\\_Region.pdf](http://www.wada-ama.org/Documents/ADAMS/Training_User_Guides/ADAMS_Codes_for_Sport_Discipline_Country_Region.pdf)

The code list for substances can also be found in the download centre: <http://www.wada-ama.org/en/ADAMS/ADAMS-Training-and-User-guides>

If you do not have the organization short name for the RMA, you may click the “contact” link in the taskbar in ADAMS, and perform a search. The short name is shown before the hyphen and the long organization name, as in the following example for FEI:



 *If I have commas within my comments text for the samples that I would like to upload, how do I deal with that?*

When you use Excel to enter your text with commas in the special input-field and save your file as a CSV-file, the system will automatically store it with commas between the columns and there should not be a problem. However, if you are creating your CSV-file off-hand (e.g. from WordPad) it is better to make sure that the entire text is included within double quotes. Otherwise, the file to be imported will not be valid since the data will not match up with the column.

For example, for the free-text field Analysis Details/Explanation:

*“The samples were analyzed for anabolic and masking agents, diuretics, and hCG using methods 1001, 2001, and 6001.”*

## 8 HELPDESK ACCESS

A Helpdesk is available to answer technical user queries about ADAMS. The Helpdesk, located in Québec, Canada, is available from Monday to Friday from 9am to 5pm Eastern Time.

- From North America dial: (866) 922-3267 (1-866-92-ADAMS)
- From outside North America: +1 (514) 904-8800
- Should you require assistance outside of the helpdesk core hours please send an email at [adams@wada-ama.org](mailto:adams@wada-ama.org).

## 9 APPENDIX A

Below you will find a sample XML file as well as the schema used by ADAMS. Tools can be found online to validate your XML data against this schema, to ensure an error free import.

### 9.1 SAMPLE XML FILE

```
<?xml version="1.0" encoding="UTF-8"?>
<resultBatch xmlns:xsi="http://www.w3.org/2011/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="file:/home/ngandriau/work/dev/adams/adams_xsd/src/xsds/labresults.xsd">
  <header>
    <lab>
      <shortName>TESTLAB</shortName>
    </lab>
    <testingType code="OOC" />
    <rma>
      <shortName>WADA</shortName>
    </rma>
    <fileCreationDate>2010-05-25</fileCreationDate>
    <transmissionSourceName>transmission source
name</transmissionSourceName>
    <nameOfCompetition>name</nameOfCompetition>
    <comments>comments 1</comments>
  </header>
  <body>
    <result>
      <testResult code="Negative" />
      <reportingDate>2010-05-25</reportingDate>
      <athlete gender="F">
        <sport code="AQ" />
        <discipline code="SW" />
      </athlete>
    </result>
  </body>
</resultBatch>
```

```
</athlete>
<sample code="Test_XML1" sampleAB="A">
  <type code="Urine">
    <analysisAttributes consistent="true">
      <attribute>IRMS</attribute>
    </analysisAttributes>
    <samplesAttributes>
      <attribute>
        <code>specificGravity</code>
        <value>2.1</value>
      </attribute>
      <!-- <attribute>
        <code>TERatio</code>
        <value>1</value>
      </attribute-->
      <attribute>
        <code>pH</code>
        <value>3.99</value>
      </attribute>
    </samplesAttributes>
    <details>details Urine sample</details>
  </type>
  <collectionDate>2010-05-25</collectionDate>
  <receptionDate>2010-05-25</receptionDate>
</sample>
<testResultReason>for Test</testResultReason>
<country code="CA" />
<region code="CA-QC" />
<city>xml city</city>
<ta>
  <shortName>CCES</shortName>
</ta>
```

```
<sca>
  <shortName>CCES</shortName>
</sca>
<moNumber>M1-0001</moNumber>
<competitionName>not showing up when
OOC</competitionName>
<sendResultTo>
  <organization>
    <shortName>wada</shortName>
  </organization>
  <organization>
    <shortName>cces</shortName>
  </organization>
</sendResultTo>
<steroidProfile>
  <variable>
    <code>5a-androstanediol</code>
    <value>1.77</value>
  </variable>
  <variable>
    <code>epitestosterone</code>
    <value>2</value>
  </variable>
</steroidProfile>
<prohibitedSubstance>
  <substance>
    <code>10</code>
    <value>1.1</value>
    <unit>X:1</unit>
    <details>test 1</details>
    <metaboliteOnly>true</metaboliteOnly>
    <metabolites>
      <metabolite>
```

```
<name>mmmmm</name>
<value>2</value>
<unit>X:1</unit>
</metabolite>
</metabolites>
<mean>1.200</mean>
<meanUnit>mg/mL</meanUnit>
<uncertainty>1.8</uncertainty>
<uncertaintyUnit>mg/mL</uncertaintyUnit>
</substance>
<substance>
  <code>Blood doping (Other)</code>
  <value>5</value>
  <unit>ng/ml</unit>
  <details>test 2</details>
</substance>
<substance>
  <code>Perfluorochemicals</code>
  <value>3.00</value>
  <unit>X:1</unit>
  <details>test 3</details>
  <metaboliteOnly>>false</metaboliteOnly>
  <metabolites>
    <metabolite>
      <name>mmmmm</name>
      <value>2</value>
      <unit>X:1</unit>
    </metabolite>
  </metabolites>
  <mean>1.8</mean>
  <meanUnit>mg/mL</meanUnit>
  <uncertainty>10</uncertainty>
```

```
                <uncertaintyUnit>mg/mL</uncertaintyUnit>
            </substance>
        </prohibitedSubstance>
    </result>
</body>
</resultBatch>
```

## 9.2 SCHEMA FILE

```
<xsd:schema                                xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:jxb="http://java.sun.com/xml/ns/jaxb" jxb:version="1.0">

    <xsd:simpleType name="SystemSupportedLocalesXSD">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="en"/>
            <xsd:enumeration value="fr"/>
        </xsd:restriction>
    </xsd:simpleType>

    <xsd:simpleType name="TestingTypeCodeXSD">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="IC"/>
            <xsd:enumeration value="OOC"/>
        </xsd:restriction>
    </xsd:simpleType>

    <xsd:simpleType name="SampleTypeCodeXSD">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Urine"/>
            <xsd:enumeration value="Blood"/>
        </xsd:restriction>
    </xsd:simpleType>

    <xsd:simpleType name="SampleJarCodeXSD">
        <xsd:restriction base="xsd:string">
```

```
<xsd:pattern value='[A|B]{1}' />
</xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="AnalysisAttributeCodeXSD">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="EPO" />
    <xsd:enumeration value="IRMS" />
    <xsd:enumeration value="hGH" />
    <xsd:enumeration value="Transfusion" />
    <xsd:enumeration value="HBOCS" />
    <xsd:enumeration value="OTHER" />
  </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="SampleAttributeCodeXSD">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="pH" />
    <xsd:enumeration value="specificGravity" />
  </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="GenderXSD">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="M" />
    <xsd:enumeration value="F" />
    <xsd:enumeration value="X" />
  </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="CountryCodeXSD">
  <xsd:restriction base="CodeXSD" />
</xsd:simpleType>

<xsd:simpleType name="CodeXSD">
  <xsd:restriction base="xsd:string">
    <xsd:pattern value='[A-Z]{2}' />
  </xsd:restriction>
</xsd:simpleType>
```

```
<xsd:simpleType name="RegionCodeXSD">
  <xsd:restriction base="xsd:string">
    <xsd:pattern value='[A-Z]{2}-[A-Z]{2}' />
  </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="TestResultCodeXSD">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Negative" />
    <xsd:enumeration value="NotAnalyzed" />
  </xsd:restriction>
</xsd:simpleType>

<xsd:complexType name="ShortNameXSD">
  <xsd:sequence>
    <xsd:element name="shortName" type="xsd:string" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="AnalysisAttributeListXSD">
  <xsd:sequence>
    <xsd:element name="attribute" type="AnalysisAttributeCodeXSD"
maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:appinfo>
          <jxb:property name="attributes" />
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="SampleAttributeXSD">
  <xsd:sequence>
    <xsd:element name="code" type="SampleAttributeCodeXSD" />
    <xsd:element name="value" type="xsd:decimal" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="ScreeningXSD">
```

```

<xsd:sequence>
  <xsd:element name="type">
    <xsd:complexType>
      <xsd:attribute name="code" type="xsd:string" use="required"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="parameter" type="xsd:decimal"/>
</xsd:sequence>
</xsd:complexType>

<xsd:complexType name="SampleXSD">
  <xsd:sequence>
    <xsd:element name="type">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="analysisAttributes"
type="AnalysisAttributeListXSD" minOccurs="0"/>
          <xsd:element name="samplesAttributes" minOccurs="0">
            <xsd:complexType>
              <xsd:sequence>
                <xsd:element name="attribute" type="SampleAttributeXSD"
maxOccurs="unbounded">
                  <xsd:annotation>
                    <xsd:appinfo>
                      <jxb:property name="attributes"/>
                    </xsd:appinfo>
                  </xsd:annotation>
                </xsd:element>
              </xsd:sequence>
            </xsd:complexType>
          </xsd:element>
          <xsd:element name="screenings" minOccurs="0">
            <xsd:complexType>
              <xsd:sequence>
                <xsd:element name="TERatio" type="xsd:decimal"
minOccurs="0"/>
                <xsd:element name="TERatioDetail" type="xsd:string"
minOccurs="0"/>
              </xsd:sequence>
            </xsd:complexType>
          </xsd:element>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>

```

```
<xsd:element name="screening" type="ScreeningXSD"
maxOccurs="unbounded">
    <xsd:annotation>
        <xsd:appinfo>
            <jxb:property name="screeningList"/>
        </xsd:appinfo>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="details" type="xsd:string" minOccurs="0"/>
</xsd:sequence>
<xsd:attribute name="code" type="SampleTypeCodeXSD" use="required"/>
</xsd:complexType>
</xsd:element>
<xsd:element name="collectionDate" type="xsd:date" minOccurs="0" />
<xsd:element name="receptionDate" type="xsd:date"/>
</xsd:sequence>
<xsd:attribute name="code" type="xsd:string" use="required"/>
<xsd:attribute name="sampleAB" type="SampleJarCodeXSD" use="required"/>
</xsd:complexType>
<xsd:complexType name="LabResultXSD">
    <xsd:all>
        <xsd:element name="testResult">
            <xsd:complexType>
                <xsd:attribute name="code" type="TestResultCodeXSD" use="required"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="reportingDate" type="xsd:date" minOccurs="0"/>
        <xsd:element name="country" minOccurs="0">
            <xsd:complexType>
                <xsd:attribute name="code" type="CountryCodeXSD" use="required"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="region" minOccurs="0">
```

```
<xsd:complexType>
  <xsd:attribute name="code" type="RegionCodeXSD" use="required"/>
</xsd:complexType>
</xsd:element>

<xsd:element name="city" type="xsd:string" minOccurs="0"/>

<xsd:element name="athlete">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="sport">
        <xsd:complexType>
          <xsd:attribute name="code" type="CodeXSD" use="required"/>
        </xsd:complexType>
      </xsd:element>
      <xsd:element name="discipline" minOccurs="0">
        <xsd:complexType>
          <xsd:attribute name="code" type="CodeXSD" use="required"/>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="gender" type="GenderXSD" use="required"/>
  </xsd:complexType>
</xsd:element>

<xsd:element name="sample" type="SampleXSD"/>
<xsd:element name="sendResultTo" minOccurs="0">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="organization" type="ShortNameXSD"
maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:appinfo>
          <jxb:property name="adoList"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
```

```
</xsd:all>
  <xsd:attribute name="lin" type="xsd:string" use="optional"/>
</xsd:complexType>

<xsd:complexType name="HeaderXSD">
  <xsd:sequence>
    <!--          required element-->
    <xsd:element name="lab" type="ShortNameXSD"/>

    <!--          required element-->
    <xsd:element name="testingType">
      <xsd:complexType>
        <xsd:attribute name="code" type="TestingTypeCodeXSD" use="required"/>
      </xsd:complexType>
    </xsd:element>

    <!--          required element-->
    <xsd:element name="rma" type="ShortNameXSD" />

    <!--          optional elements-->
    <xsd:element name="fileCreationDate" type="xsd:date" minOccurs="0"/>
    <xsd:element name="transmissionSourceName" type="xsd:string" minOccurs="0"/>
    <xsd:element name="nameOfCompetition" type="xsd:string" minOccurs="0"/>
    <xsd:element name="comments" type="xsd:string" minOccurs="0"/>
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="BodyXSD">
  <xsd:sequence>
    <xsd:element name="result" type="LabResultXSD" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:appinfo>
          <jxb:property name="resultList"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```
<xsd:element name="resultBatch">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="header" type="HeaderXSD"/>
      <xsd:element name="body" type="BodyXSD"/>
    </xsd:sequence>
    <xsd:attribute name="batchId" type="xsd:string"/>
  </xsd:complexType>
</xsd:element>

</xsd:schema>
```