

**INDEPENDENT INVESTIGATION ON BEHALF OF WORLD RUGBY  
INTO MATTERS ARISING FROM THE  
KENYAN GOVERNMENT'S ANTI-DOPING TASKFORCE FINAL REPORT**

**BY GREGOR NICHOLSON**

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## Background

1. In November 2013 “pursuant to alarming media reports on allegations that some Kenyan sportspersons may be engaged in doping and following the concerns of the World Anti-Doping Agency on the same matter”, the Kenyan Government’s Cabinet Secretary for Sport, Culture and the Arts appointed an Anti-Doping Taskforce to investigate the allegations and make recommendations.
2. Following its investigations, on 7 April 2014 the Anti-Doping Taskforce (“ADT”) duly provided the Cabinet Secretary with its completed report the Anti-Doping Taskforce Final Report.
3. The Taskforce Final Report (“TFR”) was received by the World Anti-Doping Agency (WADA) on 21 October 2014. A copy of the TFR is available on WADA’s website at the following link. <https://www.wada-ama.org/en/resources/world-anti-doping-program/kenya-anti-doping-taskforce-report>
4. On 22 October 2014, WADA sent a copy to World Rugby encouraging them “to review the report and follow up with your national federation and the relevant authorities in Kenya to address the concerns in relation to your sport expressed in the report.”

## Appointment

5. World Rugby is the world governing body for the sport of Rugby Union. Prior to 18 November 2014 it was known as the International Rugby Board (IRB). For the purposes of this report and for the sake of consistency, all references are to World Rugby irrespective of whether events occurred prior to the organisation’s formal change of name on 18 November 2014.
6. I am an independent member of the World Rugby Anti-Doping Advisory Committee. On 24 November 2014 I was formally invited by World Rugby, through its Head of Legal and Legislative Affairs, to take on the role of Investigator into the Kenya Rugby Union arising from the Anti-Doping Taskforce Final Report, more specifically to investigate and report if there is evidence that an Anti-Doping Rule Violation may have been committed by a party or parties.
7. For me to so conclude that an Anti-Doping Rule Violation may have been committed, there must *prima facie* evidence which, if it is unchallenged, could be sufficient to establish to the comfortable satisfaction of an Independent World Rugby Judicial Committee that an Anti-Doping Rule Violation (in accordance with the World Anti-Doping Code and World Rugby Regulation 21) has been committed.
8. This is an independent appointment on behalf of World Rugby. I am the designee of World Rugby pursuant World Rugby Regulation 21 and in particular Regulation 21.16.1. (as amended )

## **The Taskforce Final Report – Matters Specific to Rugby Union**

9. The Taskforce Final Report (“TFR”) addresses general doping concerns in Kenyan sport along with “case studies” on three specific sports – soccer, rugby and athletics. My investigation clearly is restricted to the rugby-specific matters raised, in particular the statement on page xiii of the TFR that *“In rugby – both at the National team level and at two of the clubs – there appears to be systematic doping of players through the use of food supplements laced with steroids”* and the recommendation in paragraph 5.2.7 on page 42 that *“The coaches who are in violation of S2.8 of the Kenya Rugby Union anti-doping regulations be subjected to a disciplinary process by the Regional Anti-Doping Organisation (RADO)”*. Ten coaches were specifically identified, namely:

### **“Sevens:**

**Paul Treu – Coach**

**Graham Henry<sup>1</sup> – Strength and Conditioning Coach**

**Felix Ochieng – Assist (sic) Coach**

**Zangqa Vuyo – Attack Coach**

**George Kimani<sup>2</sup> – Conditioning Coach**

**Michael Owino – Conditioning Coach**

*(Declared Incorrect by Paul Treu during his interview on 3 December 2014. Graham Bentz held the post at the time.)*

*(<sup>2</sup> Corrected by Paul Treu during his interview to Joffre Kimani.)*

### **Fifteens**

**Jerome Paarwaters – Head Coach**

**Charles Ngovi – Assist (sic) Coach – Backs**

**Paul Murunga – Assist (sic) Coach – Forwards**

**Richard Ochieng – Conditioning Coach”**

10. The call for disciplinary action is repeated in Section 7 Recommendations on p.49 viz. *“The Rugby officials identified as deliberately doping players to be subjected to an anti-doping disciplinary process.”*
11. These TFR recommendations appear to me to hinge on the laboratory analysis of specific supplements which the KRU was instructed to surrender to the ADT. The laboratory analysis was undertaken on behalf of the ADT by the Drug Analysis and Research Unit (DARU) which is part of the Department of Pharmaceutical Chemistry, University of Nairobi. The DARU Analysis Report was attached as Appendix VI of the TFR and accompanies this report as Appendix 1.
12. The DARU Analysis report does not record the exact product name of the four EVOX Advance Nutrition supplements which were analysed, but references them by batch number, manufacture date and expiry date. The product names of the supplements are listed on page 30 of the TFR, namely *5x Formidable Mass, Cyto Crank, 100% Whey Protein*

and *BCAA Stack*. The DARU Analysis Report records that all four supplements tested positive for “steroids”. It is no more specific than that.

13. I established from World Rugby early in my investigation that no other formal rugby-related investigations into the TFR or disciplinary actions based on the TFR recommendations were being undertaken, whether by the Regional Anti-Doping Organisation (Africa Zone V) or WADA.

#### **The Investigation Process and the Key Issues**

14. Following my initial review of the TFR, a preliminary report was provided to World Rugby on 27 November 2014 which included a number of observations (which were restricted to Rugby Union specific issues) and a list of questions arising from these observations and to whom they should be addressed, whether by email or in-person interview.
15. World Rugby then communicated with the KRU and the Cabinet Secretary to obtain further information to assist my investigation. Appendix 3 includes a timeline for World Rugby's communications with these entities in relation to the Evox supplements and DARU analysis.
16. Whilst I noted some ambiguity or lack of clarity on various statements in the TFR arising from the ADT's investigations, their questionnaire response analysis and their interviews, the key issues as far as this investigation was concerned were:
- 16.1 On page 40 of the TFR in 5.2.5 sub-paragraph 1 *“the taskforce finds that the KRU and specific officials were in contravention of S.2.6 (b) of the KRU's anti-doping regulations.....”* . That rule relates to possession by player support personnel of any Prohibited Substance in connection with a player, match, series of matches and/or tournament or training. In the next paragraph of the TFR on the same page, the taskforce *“observes that there was genuine ignorance on the part of the KRU officials with respect to the violation of this rule.”* The specific coaches are then named on page 42.
- 16.2 This “finding” of possession, in contravention of S.2.6(b) of the KRU's anti-doping regulations, is based entirely on the DARU analysis of the supplements.
- 16.3 It was therefore in my view important to establish:
- (a) what was the analysis process and
  - (b) what Prohibited Substances were detected in the supplements.
  - (c) who sourced and provided to the players the supplements which were seized and analysed by DARU, and when?
  - (d) who within Kenyan rugby had been interviewed by the ADT?

## Interviews and Statements

17. On 3 November 2014, prior to World Rugby commencing any formal investigation into matters arising from the TFR, Kenya Sevens coach (at that time) Paul Treu took the opportunity of his presence in Dublin, Ireland on other matters to speak to World Rugby at their office about the TFR and subsequent media reports. World Rugby was represented at that meeting by Ms Susan Ahern, Head of Legal and Legislative Affairs, Ilaria Baudo, Anti-Doping Manager – Testing and Education, and David Ho, Anti-Doping Manager - Compliance and Results. With Paul Treu's consent the discussion was audio recorded and I have listened to that recording.
18. Subsequent to World Rugby's formal investigation being launched, a further interview was arranged with Paul Treu on my behalf on 3 December 2014 while he was in Dubai with the Kenya Sevens team for the HSBC Sevens World Series. For expediency, the opportunity was taken to conduct a series of interviews in Dubai given the presence there of World Rugby representatives and the Kenya Sevens team. The interviews were conducted on my behalf by Ms Yvonne Nolan, World Rugby Legal Counsel, and Ms Ilaria Baudo, Anti-Doping Manager with whom I agreed in advance a series of consistent questions relating to the issues arising from the TFR, although leaving them the flexibility to ask additional questions as required.
19. Also interviewed in Dubai were Mike Friday, Kenya Sevens coach June 2012 to June 2013 (who was there in his capacity as coach of another Sevens team), and the twelve players in the Kenya Sevens squad for the Dubai tournament, namely:  
  
Patrice Agunda, Andrew Amonde, Oscar Ayodi, \*Oliver Mangani, \*Leonard Mugaisi, \*Dennis Muhanji, Bush Mwale, Alex Olaba, Samson Onsomu, Tony Onyango, Daniel Sikuta, and \*Michael Wanjall. (*\*Four players were recalled for a second interview when it became known that they were also involved in the Fifteens squad.*)
20. It was emphasised to all interviewees that the interview was not in itself a disciplinary hearing but that responses would be "on the record" and could be evidence at any subsequent hearing that might ensue. The agreed consistent questions asked of the players are attached in **Appendix 2**. Similar questions and some additional specific questions were put to Paul Treu and Mike Friday. All the interviews were recorded and I have listened to them all.
21. Plans to interview some of the KRU officials in Dubai were postponed due to time constraints.
22. Signed statements as a record of their interviews in Dubai were received from Paul Treu, Mike Friday and all twelve players.
23. In a letter dated 26 November 2014 to World Rugby, the KRU confirmed that no player, coach, manager or official attached to the Kenya Sevens or National Fifteens team was interviewed by the ADT. According to the KRU, three officials from the KRU were

Interviewed by the ADT, namely Michael Otieno, CEO, Dr Totooti Mwirigi, KRU doctor, and Chiro Nyinge, former Director of the KRU Board.

24. In an email 9 February 2015 Sarah Idieva, on behalf of the Kenyan Government Sports Secretary, advised that the following were interviewed by the ADT:

Benjamin Ayimba	- Former Rugby 7s Coach
Eliud Sikanga	- Rugby Vice Chairman Western Bulls Kakamega
Cleophas Shimanyula	- Chairman, Kakamega Home Boyz
John Bosco Muamba	- Rugby Coach/Referee [Mangu High]
Dr. Maina Max Muniafu	- Former Rugby Player and Official
Chiro Nyinge	- Director-Competition and fixtures, KRU
Michael "Tank" Otieno	- Rugby Services Manager, KRU
Toroti Murligi	- Medical Doctor of the KRU

25. The ADT did not interview any of the ten coaches recommended in the TFR for a disciplinary process.

#### **The Use of Supplements and Contaminated Products**

26. The use of supplements by sport participants is common place. Their use, per se, is not prohibited. Under the principle of strict liability it is for each individual athlete or player to ensure that in consuming any supplement he is not ingesting a Prohibited Substance.

27. There is a multitude of doping cases which have resulted in athletes being prosecuted by anti-doping authorities for the presence in their sample of a Prohibited Substance where this has been accepted by the judicial body as being due to the consumption of a sports supplement. Research conducted by the HFL Sport Science laboratory in 2013<sup>1</sup> found that 10% of products within a survey of some of Europe's top supplement brands were contaminated with steroids and stimulants.

28. In my own experience and as evidence by widespread public endorsements and marketing, the provision of supplements to rugby players by their club or Union is common place and indeed favoured by some specifically to try and minimise the risk involved for players compared to the higher risk of individual players sourcing their own supplements. In that regard, what the KRU personnel did in sourcing supplements was not unusual.

29. That positive doping tests can be caused by contaminated supplements, rather than the deliberate ingestion of a Prohibited Substance, is now specifically covered by a new provision on Contaminated Products at Article 10.5.1.2 of the 2015 World Anti-Doping Code and the Code definition of *Contaminated Products*:

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<sup>1</sup> HFL Sport Science 2013 European Supplement Contamination Survey, C. Russell, D. Hall, P. Brown; HFL Sport Science, Newmarket Road, Fordham, Cambridgeshire, CB7 5WW, United Kingdom (now known as LGC Head Office, Queen's Road, Teddington, TW11 0LY, United Kingdom)

Article 10.5.1.2

*In cases where the Athlete or other Person can establish No Significant Fault or Negligence and that the detected Prohibited Substance came from a Contaminated Product, then the period of Ineligibility shall be, at a minimum, a reprimand and no period of Ineligibility, and at a maximum, two years Ineligibility, depending on the Athlete's or other Person's degree of Fault.*

Contaminated Product

*A product that contains a Prohibited Substance that is not disclosed on the product label or in information available in a reasonable internet search.*

30. It is worth noting, although ultimately not relevant to my own conclusion of this investigation, that the aforementioned new Code Article 10.5.1.2 on Contaminated Products applies to violations of Code Article 2.1 (Presence of a Prohibited Substance or Its Metabolites or Markers in an Athlete's Sample), 2.2 (Use or Attempted Use by an Athlete of a Prohibited Substance or a Prohibited Method), and 2.6 (Possession of a Prohibited Substance or a Prohibited Method). Article 2.6 (Possession) applies not just to Athletes, as in 2.1 and 2.2, but also to Athlete Support Persons. This would seem to suggest that Athlete Support Persons could be charged with an anti-doping rule violation for possessing a Contaminated Product. However, no mention is made in Article 10.5.1.2 of Articles 2.7 (Trafficking or Attempted Trafficking in any Prohibited Substance or Prohibited Method), 2.8 (Administration or Attempted Administration to any Athlete.... of any Prohibited Substance or Prohibited Method.....) or 2.9 (Complicity).
31. It is not common for athlete support personnel to be prosecuted for an anti-doping rule violation in relation to the provision of a contaminated product (as now defined in the WAD Code) when this has been deemed to be the probable cause of an athlete's positive doping control test. One such case, however, is that of Croatian boxing coach Kristijan Tepes who was banned for two years in 2013 for providing to a boxer a supplement containing geranium oil as an ingredient which was accepted as the cause of the boxer returning an adverse finding for the Prohibited Substance methylhexanamine.
32. In addition to the supplements referenced in the TFR, other supplements or meal replacement products mentioned during the course of this investigation as being used by or made available to players are:  
*Apex Nutrition pure Acetyl- L – Carnitine, Apex Nutrition L- Glutamine, Apex Nutrition Nitrox HGH, Futurelife "porridge", USN CytoPower, USN ester creatine, Weider 100% Whey Protein, Weider Mega Mass (meal replacement), Whey Isolate (brand not specified), Creatine (brand not specified).*  
Two of these products were used by two of the interviewed Sevens players who indicated they had bought them at some stage from two separate stores in Nairobi.



33. Having undertaken online research, I am not aware of any specific issues with, or ingredients in any of these products which would indicate possible doping or contamination with a Prohibited Substance.
34. At paragraph 5.2.4 of the TFR it is stated that 36 Kenyan players were subject to doping control tests during 2013, 24 out-of-competition and 12 in-competition, with no positive tests reported. World Rugby has confirmed that 45 doping control tests were carried out on Kenyan players in 2013, rising to 53 tests in 2014 with no adverse findings in either year.

#### **The Evox Supplements and Analysis**

35. Appendix 3 details a timeline of events relating to the KRU's purchase of Evox supplements, their seizure by the ADT, their analysis by DARU, their subsequent analysis by a WADA Accredited Laboratory on behalf of World Rugby, and the efforts made by World Rugby to obtain information on the DARU analysis.
36. On page 39 of the TFR Mike Friday is identified by the authors as the coach who initially introduced the use of food supplements to the Sevens team and that the supplements used were supplied through Weider Nutrition, a store located at the Hilton Hotel, Nairobi. There is no suggestion that Mike Friday supplied Evox supplements. Mike Friday was interviewed on my behalf by World Rugby in Dubai on 3 December. He confirmed that he was Kenya Sevens coach from June 2012 to June 2013, his employment officially ending on 31 July 2013. He confirmed that he was not involved in the purchase and provision of Evox supplements, adding that batch-tested Apex supplements (a different brand) were used in addition to those from Weider Nutrition. He is not one of the ten coaches recommended by the TFR for a disciplinary process and there is no evidence to suggest that he should be.
37. On page 40 of the TFR in the second paragraph it states that the Kenya Sevens coach Paul Treu, (Mike Friday's replacement as 7s coach), *"came with his own regime of supplements and... introduced... Evox (supplements)."* This runs contrary to the KRU Media Release of 22 October 2014 which states that Evox supplements were brought in by the KRU before Treu started (in November 2013, four months after Mike Friday left). The KRU Media Release stated:

*"Treu was actually responsible (for) introducing a 'no-supplement policy' when he arrived in Kenya to take over coaching the Sevens team in November 2013", with Treu himself quoted as saying;*

*"When I arrived, players were taking typical off-the-shelf supplements. We decided – as we'd done in South Africa – to not endorse or advocate taking supplements of any kind, preferring to focus on proper nutrition. That's why from the very beginning, when we came into the Kenyan Sevens set up, we tried to get rid of supplements. It was one of the first actions we took on arrival in Kenya. We wanted to substitute supplements with food and rather use only a certified product that was guaranteed not to be contaminated (FUTURELIFE). The use of supplements is definitely NOT part of our game plan."*

38. These statements were reiterated by Paul Treu during his interviews with World Rugby and supported by the players who were interviewed in Dubai.
39. The KRU willingly provided World Rugby with copies of the orders and email correspondence relating to the purchase of Evox supplements as detailed in **Appendix 3**. In doing so the KRU indicated that none of this information had been provided to the ADT as it had not been requested by them. The timeline clearly shows that the ordering of Evox supplements was already in process two months prior to Paul Treu starting in post as Kenya Sevens coach. It is unclear on what basis the TFR should state that Paul Treu introduced Evox supplements. All the evidence before me is contrary to that. Similarly, there is no evidence before me to indicate the involvement of any of the other nine named coaches in the purchase of the Evox supplements.
40. **Appendix 3** outlines the efforts made by World Rugby over a prolonged period to obtain more information on the DARU analysis method and to obtain the residue of the supplement samples analysed by them.
41. Evox Advanced Nutrition is a South African based supplements company. On 21 November 2014 World Rugby sought the assistance of the South African Institute of Drug Free Sport (SAIDS) regarding the purchase in South Africa of the same four Evox products which had returned the positive test for steroids in the analysis by DARU. As requested by World Rugby, SAIDS sent these by courier on 11 December 2014 to the WADA accredited Swiss Laboratory for Doping Analyses.
42. On 29 January 2015 the Swiss Laboratory for Doping Analyses (LAD) provided World Rugby with their report on their analysis of the four new Evox supplements sent to them by SAIDS on behalf of World Rugby. The laboratory reported that *"none of the transmitted supplements samples contains performance enhancing drugs"*. See **Appendix 4**.
43. From here on in, once it became clear that there might be an issue with the reliability of the DARU analysis of the supplements in regard to establishing to the required standard whether an Anti-Doping Rule Violation may have been committed, all further interviews were put on hold until more information was obtained on this fundamental issue.
44. The next important step was to have the actual supplement products which had been analysed by DARU re-analysed at the LAD.
45. Following numerous requests by World Rugby to the Kenyan Government and ultimately after the in-person involvement of WADA's Africa Region Director, the residue of the supplement products analysed by DARU were delivered by the Kenya Government chemist to Christine Mugeru, Executive Manager of the Africa Zone V Regional Anti-Doping Organisation in Nairobi on 6 February 2015. As requested by World Rugby Ms Mugeru sent the residue of the supplement products analysed by DARU by courier to the LAD in

Switzerland for further analysis. It was recorded that these were partial and unsealed samples. Furthermore, on receipt by LAD, one of the containers had been damaged with spillage of the supplement powder but with some powder still inside the container. World Rugby requested that this still be analysed. LAD provided a preliminary report to World Rugby with a photographic and descriptive comparison of the new containers of Evox supplements previously analysed by them and the residual supplements just received including the damaged container. This preliminary report is attached as **Appendix 5**.

46. On 24 February 2015 LAD sent World Rugby its analysis report on the four residual supplements. Again LAD reported (contrary to the DARU analysis) that *"none of the transmitted supplements samples contains performance enhancing drugs"*. See **Appendix 6**.

47. As suggested by LAD for comparative purposes between the LAD analysis and the DARU analysis, World Rugby had sought from the Kenyan Government, via Sarah Idieva, PA to the Sports Secretary, through whom correspondence was now being channelled, further information regarding the DARU analysis process, any raw data in support of its findings and/or a copy of a full laboratory report.

48. After several follow-up requests Sarah Idieva sent an email to World Rugby on 16 April 2015 with a response from DARU which stated:

*"1. The tests carried out in their laboratory were preliminary spot tests that were only qualitative and not confirmatory. Detailed confirmatory tests for specific steroids would require chromatographic analysis.*

*2. Such spot tests typically could not generate the kind of data the World Rugby is requesting for (sic). If the Lausanne laboratory would like to repeat the tests, the procedures are attached for reference."*

49. The DARU analysis procedures are attached as **Appendix 7**. DARU is not a WADA Accredited Laboratory.

50. World Rugby continued to seek further information regarding the DARU analysis, more specifically:

- What were their observations (which colour was observed)?;
- Did they use a Positive Control (sample known to contain steroids) and what was the result?;
- Did they use a Negative Control (reagent blank) and what was the result?;
- Did they perform several tests on the same complements? (in their procedure for Naphthol-sulfuric acid, it is recommended carrying out this test in conjunction with the sulfuric acid test);
- Did they perform their tests several times (initial testing procedures and confirmation procedures) as for anti-doping?;
- Do they have any form of "Documentation Package"?

51. After several reminder emails, Sarah Idleva sent an email to World Rugby on 29 June 2015 including an extract from DARU to say that what they have provided so far is sufficient. See **Appendix 8**.
52. Finally, in the absence of the additional information requested from DARU, on 7 July 2015 LAD sent World Rugby its final Scientific Report which compared the various analyses. This is attached as **Appendix 9**. The report details how LAD prepared the samples and their analytical method on which they state *"The chromatography coupled with mass spectrometry (GC/MS) is the gold standard for detection of steroid validated by peer reviews. The method used has been developed especially for the supplements and is inspired from the method used in many Anti-Doping laboratories."*
53. In regard to the methods used by DARU, the LAD report describes them as *"preliminary spot tests ....described in 'Clark's Analysis of Drugs and Poisons', third edition in chapter 19."* The LAD report further states *"Spot tests are only preliminary tests and require additional confirmation testing."* Also, *"they are only used to indicate the possible presence of substances, but not as reliable tests. They are known to have potential false positive and/or false negative. These tests must imperatively be confirmed by assays based on the use of chromatography and mass spectrometry to obtain reliable results."*
54. Ultimately, irrespective of further enquiries on some of the outstanding issues highlighted in the Preliminary Report, or on some of the ambiguous aspects of the wording of the TFR or inferences which were highlighted in my Preliminary Report, these I concluded became irrelevant given the unreliability of the DARU Analysis Report in regard to possible proof of doping to the required standard.

## Conclusion

55. From the information obtained subsequent to publication of the TFR, there is nothing that I can see to justify the statement on page xili of the TFR that *"In rugby – both at the National team level and at two of the clubs – there appears to be systematic doping of players through the use of food supplements laced with steroids."*
56. That there has been use of "food supplements" by the KRU, by Kenyan teams and Kenyan players is not in doubt, but that in itself is not doping.
57. That there is a risk of "contaminated products" being used by rugby players in Kenya, as there is throughout the sporting world, cannot be ruled out.
58. However, my role as Investigator is specific, namely to make an assessment as to whether there is evidence that an anti-doping rule violation may have been committed by a party or parties. It is not my role to comment on the rights or wrongs of players taking supplements, to define what constitutes a "supplement", or to critically examine what steps were taken, or otherwise, by the KRU and its officials and athlete support personnel, or by clubs in

Kenya, to caution against the possible ingestion of Prohibited Substances by their players who were provided with supplements.

59. The DARU analysis of the four Evox supplements is not I conclude, *prima facie* evidence that could establish to the comfortable satisfaction of an independent World Rugby Judicial Committee that an anti-doping rule violation has been committed by any of the relevant parties. Indeed, the LAD analysis is reliable evidence that the supplements alleged to give rise to anti-doping rule violations were in fact free of any Prohibited Substance.
60. The only apparent reference within the TFR to link two clubs with the TFR statement that *"there appears to be systematic doping of players through the use of food supplements laced with steroids"* is the indication on p.40 of the TFR, in the continuation of paragraph 5.2.4.2, that *"the proprietor of Weider Nutrition store further informed the taskforce that he still supplies supplements to some local rugby clubs."* No information is provided in the TFR on what supplements were supplied by Weider Nutrition to the clubs, nor were any of these supplements subject to analysis. Furthermore *"the Taskforce did not get an opportunity to interview officials from (the two clubs)."*
61. It is my clear conclusion that there are no grounds arising from the Anti-Doping Taskforce Final Report to justify taking disciplinary action against the coaches named in the TFR, namely:
- Sevens:
- Paul Treu – Coach  
Graham Bentz<sup>1</sup> – Strength and Conditioning Coach  
Felix Ochleung – Assist (sic) Coach  
Zangqa Vuyo – Attack Coach  
Jofre Kimani<sup>2</sup> – Conditioning Coach  
Michael Owino – Conditioning Coach  
(<sup>1</sup>As corrected by Paul Treu during his interview. He said Graham Henry had been incorrectly named in the TFR.)  
(<sup>2</sup>As corrected by Paul Treu during his interview, not George Kimani as named in the TFR.)
- Fifteens
- Jerome Paarwaters – Head Coach  
Charles Ngovi – Assist (sic) Coach – Backs  
Paul Murunga – Assist (sic) Coach – Forwards  
Richard Ochieng – Conditioning Coach,  
nor anyone else involved in the Kenya Rugby Union or rugby in Kenya.



Gregor Nicholson  
Independent Investigator  
on behalf of World Rugby

Signed at World Rugby's offices, Dublin, Ireland, 16 February 2016

## Appendix VI: laboratory results of Food Supplements

UON/CHS/DARU/COA /1

**DRUG ANALYSIS AND RESEARCH UNIT (DARU)**

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

UNIVERSITY OF NAIROBI

P.O. BOX 19676-00202, NAIROBI

TEL: 020-2314294 Email: daru@uonbi.ac.ke

**Preliminary report on tests for prohibited substances in the samples submitted.**

<b>DARU No.</b> 533/13, 534/13, 535/13 and 536/13	<b>DATE RECEIVED:</b> 5-12-2013
<b>CLIENT:</b> Anti-Doping Task Force ( Prof. Moni Wekesa)	<b>PRODUCT:</b> EVOX <sup>®</sup> Nutritional powders; four in number

**INGREDIENTS:** As per label claim  
**CONTAINER:** Plastic Containers  
**CONTENTS:** Powder  
**MANUFACTURER:** Evox PO BOX 1551, Highlands North, 2037.  
**REQUEST:** Test for steroids and amines

**ANALYSIS REPORT**

Sample Code	Sample	Test for Steroids
Positive control	Betamethasone valerate	Positive
Negative control	Chloroform	Negative
533/13	EVOX <sup>®</sup> Advance Nutrition. BNO: 115513; Mfg: 05/2013 Exp: 05/2015	Positive
534/13	EVOX <sup>®</sup> Advance Nutrition BNO: 161913; Mfg: 09/2013 Exp: 09/2015	Positive
535/13	EVOX <sup>®</sup> Advance Nutrition BNO: 1411113; Mfg: 11/2013 Exp: 11/2015	Positive
536/13	EVOX <sup>®</sup> Advance Nutrition BNO: 206813 Mfg: 08/2013 Exp: 08/2015	Positive

**ANALYST (S):** Mr. Obed K. King'ondo**CHECKED BY:** Dr K. O. Abuga

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## KENYA RUGBY UNION ANTI-DOPING INVESTIGATION QUESTIONS TO BE PUT TO KENYAN SEVENS PLAYERS

*World Rugby has commenced an investigation into the outcomes of the Kenya Government Task Force Report (April 2014, issued October 2014) and whether an anti-doping rule violation may have been committed. World Rugby has appointed Mr Gregor Nicholson as the independent investigator and a designee of World Rugby to assist us with the investigation (pursuant to World Rugby Reg.21.16.1), which will be facilitated through the joint efforts of the Legal and Anti-doping Departments of World Rugby. The interview is being conducted on behalf of the investigator. You have been asked to attend an interview because you are a player with the Kenyan Sevens Team.*

*This interview is not in itself a disciplinary hearing and no judgement is being passed at this stage in relation to whether an anti-doping rule violation has been committed. That can only be done after a formal judicial process which this is not. However this is a formal investigation to see if there is any evidence that an anti-doping rule violation may have been committed and your responses will be “on the record” and could be evidence at any subsequent hearing.*

*You are obliged to cooperate with the investigation pursuant to Clause 11.20.1 of the World Rugby Sevens World Series Terms of Participation and World Rugby Regulation 20.7.1. If you do not cooperate or if World Rugby believes or comes to believe that answers have not been provided by you truthfully or fully, you may be liable to a Misconduct charge for failing to cooperate and this could result in sanctions for you. This interview will be recorded for the purposes of the investigation. Should you admit to any action which in itself may constitute an anti-doping rule violation and which therefore may be subject to a separate charge being brought against you, and at the time you make that admission it is the only reliable evidence, then please note that such admission may result in the applicable period of ineligibility being reduced by up to one half in accordance with World Rugby Reg.21.22.7.*

1. When did you first join the National 7s squad?
  
  
  
  
  
  
  
  
  
  
2. Have you been a member of the squad throughout that time or are there any periods when you were not part of the squad?
  
  
  
  
  
  
  
  
  
  
3. Were you coached by Mike Friday and/or Paul Treu?

4. Aside from supplement use in Rugby Union did you observe in the sport in Kenya use of PEDs and if so what PEDs were observed?
5. What was/is discussed by coaches with players at national and club level in relation to PEDs?
6. Do coaches in Rugby Union condone or encourage the use of PEDs to your experience?
7. Can you comment on particular coaches?
8. It is stated that Mike Friday, during his tenure as 7s Coach, introduced the provision of supplements to the 7s team. Is that so?
9. If yes, what supplements were provided?
10. Prior to then, were supplements being used by you and if so which supplements and how did you get them?



11. What, if anything, was said to you about taking the supplements provided by the team/KRU?
12. Who brought in the Evox supplements and when?
13. What, if anything, was explained to you about the Evox supplements and the risks?
14. Have the two supplements Mega Max Creatin and EVOX CYTO CRANK ever been provided by the KRU to you?
15. Were any of you who were tested in 2013, or in the early months of 2014, being provided with the supplements which were analysed by the TF?
16. If so, were any of you provided with supplements with the same batch numbers as those analysed by DARU? Was any record kept of the batch numbers of the supplements provided?

17. Was it the case that the supplement use was stopped a few days prior to the competition? If so, why?
18. A KRU press release stated *"Treu was actually responsible (for) introducing a 'no-supplement policy' when he arrived in Kenya to take over coaching the Sevens team in November 2013"* Was that the case?
19. What supplements were being used at that time? Just the Evox ones sourced by the KRU and submitted for analysis? Were you (also) sourcing your own supplements?
20. What was actually done by Paul Treu and his team management (who?) to stop you using these supplements?
21. What supplements or nutritional products other than normal foodstuffs are now provided to the team e.g FUTURELIFE?

22. Were you approached directly or via your Club by the Kenya Anti-Doping Taskforce?
23. Were you asked to complete a questionnaire in relation to the use of Prohibited Substances within Sportspersons and/or Rugby Players in Kenya?
24. Have you ever used supplements? If so which ones? When did you take them? Where did you get them from?
25. Have you ever been provided supplements by past or present coaches, managers, medical staff, or any member of KRU? If so which supplements? When?
26. Have you ever taken EVOX products? Who were they supplied by?
27. Have you ever been warned about the risks of taking supplements?
28. Have you received Anti-Doping education/information by your current and/or past coach and/or any member of the KRU?

29. Have you been provided with the IRB Anti-Doping Handbook? Have you completed the online Anti-Doping E-Learning Programme?

30. Are you aware of any doping activities within rugby community in Kenya?

31. Is there anything else you wish to add?

I ..... confirm that this document sets out a full and accurate record of my interview conducted by Yvonne Nolan and Ilaria Baudo as part of the World Rugby investigation and that I have participated willingly, freely and answered truthfully, accurately and completely to the best of my knowledge.

Signed: .....

Date: ...../..... 2014 Dubai, UAE

## EXOX SUPPLEMENTS – TIMELINE (and associated relevant events)

DATE	EVENT	NOTES
7 Jun 2013	7s Coach Mike Friday leaves KRU employ (officially 31/7/13)	MF signed statement
3 Sep 2013	Evox quotation to KRU for 10 items - Creatine HCL, Cyto Crank, BCAA Stack, Whey Protein x4 flavours, 5XL Formidable Mass x3 flavours	Quotation
19 Sep 2013	Evox (Rikus) request freight quote for supps from Jhb to Nakuru Athletic Club, Rift Valley	Per copy email
8 Oct 2013	KRU (Caleb Kiprotich) email to Evox (Rikus) confirming supplements order (per quotation?).	Per copy email
9 Oct 2013	Evox request another freight quote to KRU, RFUEA Grounds, Nairobi	Per copy email
7 Oct 2013	Evox (Rikus) passes freight quote to Caleb Kiprotich at KRU	Per copy email
1 Nov 2013	Paul Treu starts as 7s coach along with other management – Graham Bentz, Vuyo Zangqa, Felix Ochieng, Kimani, Owino	PT statement
5 Dec 2013	Four Evox supplement samples delivered to ADT by KRU	ADT letter 6/3/14 to KRU
5 Dec 2013	DARU receipt of four Evox Advance Nutrition supplements identified by BNO Numbers, manufacturing date and expiry date, all positive for steroids	Per DARU Analysis Report Appendix VI on p.70 of the TFR
6 Mar 2014	ADT letter to KRU acknowledging receipt of supplement samples on 5/12/13	
17 Mar 2014	ADT letter to KRU confirming lab analysis report that ALL the supplements contain steroids and demanding surrender of all such supplements and to desist from using the same with immediate effect.	
18 Mar 2014	ADT signed receipt of supplement stock surrendered to them by KRU	
31 Mar 2014	ADT signed receipt of further supplement stock surrendered to them by KRU	
21 Nov 2014	WR request to the South African Institute of Drug Free Sport (SAIDS) re the purchase and shipping of new sealed Evox supplement samples to a WADA Laboratory.	
2 Dec 2014	WR letter to Cabinet Secretary Kenyan Government Ministry for Sport advising of the investigation, seeking assistance and advice on point of contact.	
	WR request to the WADA accredited Swiss Laboratory for Doping Analyses (LAD) to analyse the supplements referenced in the TFR for prohibited substances (unspecified), both new samples and residual samples of the supplements tested by DARU if these can be obtained from Kenya.	
3 Dec 2014	Email to WR from Mike Friday (further to interview) confirming the supplements used by the Sevens squad during the 2012-13 season, none of which were Evox.	
8 Dec 2014	WR follow-up letter to Cabinet Secretary.	

<b>9 Dec 2014</b>	WR assistance sought from Africa Zone V RADO Executive Manager Christine Mugeru (CM) in obtaining point of contact and residual supplements from the Ministry for Sport for further testing by WR at a WADA accredited lab.	
<b>11 Dec 2014</b>	Four new Evox advance nutrition supplement samples purchased on behalf of WR by SAIDS and sent by them, as requested by WR, direct to the WADA accredited laboratory in Switzerland, the exact same branded supplements referenced in the TFR on page 30: 5x formidable mass; Cyto Crank; 100% whey protein; BCAA stack (although with more up-to-date batch numbers).	
<b>12 Dec 2014</b>	On the advice of RADO, WR repeat correspondence sent to Mr. Japhther K. Rugut, Ministry of Youth, Culture and Sports referencing the earlier letters to the Cabinet Secretary.	
<b>12 Dec 2014</b>	<i>Paul Treu resigns as Kenya Sevens coach</i>	
<b>15 Dec 2015</b>	Email from KRU to WR providing all the requested details of the Evox supplements orders made by the KRU (included herein).	
<b>23 Dec 2015</b>	WR reminder letter to Mr. Japhther K. Rugut, Ministry of Youth, Culture and Sports.	
<b>6 Jan 2015</b>	Acknowledgement mail to WR from Sarah Idieva on behalf of Mr Rugut.	
<b>15 Jan 2015</b>	KRU advises WR that at a meeting with the Cabinet Secretary he advised not having received the previous WR correspondence.	
<b>21 Jan 2015</b>	Repeat correspondence from WR to Cabinet Secretary repeating the request for access to the residual supplements.	
<b>26 Jan 2015</b>	WR ask for WADA's assistance in securing the residual supplement samples from the Kenyan Government.	
<b>29 Jan 2015</b>	LAD reports to WR on their analysis of the new Evox supplements purchased by WR. None contain PEDs. LAD also ask that if the residual supplement samples are obtained for analysis, WR should "also obtain the analyses raw data (chromatograms for example), so that we can verify whether the peak in question actually correspond to steroids".	See Appendix 3
<b>5 Feb 2015</b>	WADA email re positive in-person discussions by their Africa Region Director and the Cabinet Secretary and Sports Secretary with the promise that the residual supplements will be handed over to CM at RADO.	
<b>6 Feb 2015</b>	The four residual supplements analysed by DARU are delivered to the RADO office by Kenya Government chemist "unsealed and partial" per CM. Shipped by CM to the LAD as requested by WR.	CM acknowledgemet email to Sarah Idieva (Sports Secretary PA) 6/2/15

<b>9 Feb 2015</b>	LAD confirms receipt of the four residual supplements and advise that one container was broken but with some of the powder still inside. WR ask that it still be tested. The batch numbers match those in the DARU analysis report.	
<b>10 Feb 2015</b>	Preliminary report from LAD to WR with photo and descriptive comparison of the residual samples and the new samples previously analysed. Shows the whey protein to be the damaged container.	See Appendix 4
<b>11 Feb 2015</b>	WR email to Sarah Idieva (SI) requesting <ul style="list-style-type: none"> <li>• release to CM at RADO of all the other supplements surrendered to the ATF by the KRU;</li> <li>• any raw data with respect to the DARU analysis in support of its findings and or a copy of a full DARU laboratory report;</li> <li>• chain of custody after handover by the KRU;</li> <li>• who had access to them.</li> </ul>	Note: all subsequent emails to/from SI were also cc'd to the Cabinet Secretary and Sports Secretary
<b>23 Feb 2015</b>	SI email in response to WR advising the supplements released to RADO but that due to "government procedures" the rest of the supplements cannot be released; providing a copy of the DARU analysis report (no additional data) and DARU chain of custody documentation; that the residue of the supplements analysed by DARU had remained in their custody until handed to the RADO; they are not able to say who had access to the supplements while they were in storage.	
<b>24 Feb 2015</b>	LAD analysis report to WR on the residual supplements confirms that none of the transmitted supplements contains PEDs.	See Appendix 5
<b>27 Feb 2015</b>	WR email to SI advising no more supplements need to be released but repeating the request for the raw analysis data from DARU.	
<b>23 Mar 2015</b>	WR reminder email to SI re raw data.	
<b>1 Apr 2015</b>	SI to WR that awaiting response from DARU.	
<b>16 Apr 2015</b>	SI to WR with response from DARU that <p>"1. The tests carried out in their laboratory were preliminary spot tests that were only qualitative and not confirmatory. Detailed confirmatory tests for specific steroids would require chromatographic analysis.</p> <p>2. Such spot tests typically could not generate the kind of data the World Rugby is requesting for. If the Lausanne laboratory would like to repeat the tests, the procedures are attached for reference."</p>	See Appendix 6 for the DARU procedures

<b>20 Apr 2015</b>	<p>WR email to SI asking of DARU's procedures</p> <ul style="list-style-type: none"> <li>• What were their observations (which color was observed)?;</li> <li>• Did they use a Positive Control (sample known to contain steroids) and what was the result?;</li> <li>• Did they use a Negative Control (reagent blank) and what was the result?;</li> <li>• Did they perform several tests on the same complements? (in their procedure for Naphthol-sulfuric acid, it is recommended carrying out this test in conjunction with the sulfuric acid test);</li> <li>• Did they perform their tests several times (initial testing procedures and confirmation procedures) as for anti-doping?;</li> </ul> <p>Also, do they have any form of "Documentation Package".</p>	
<b>8 May 2015</b>	WR reminder email to SI	
<b>21 May 2015</b>	WR further reminder to SI	
<b>22 May 2015</b>	SI acknowledgement to WR that awaiting DARU's response.	
<b>26 Jun 2015</b>	WR third and final reminder to SI and that in the absence of a response, WR will conclude the investigation. Email cc'd to WADA's Africa Region Director.	
	WADA's Africa Region Director email to SI cc the Cabinet Secretary and Sports Secretary calling "upon our colleagues in Nairobi to continue their efforts to obtaining the information....."	
<b>29 Jun 2015</b>	Email from SI including extract reply from DARU saying that what they have provided so far is sufficient.	See Appendix 7
<b>7 Jul 2015</b>	Final Scientific Report to WR from LAD	See Appendix 8
<b>18 Aug 2015</b>	Email WR to SI that In light of no further information being provided, World Rugby will conclude its investigation	





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STS 288

## Analysis of nutritional supplements

### INTRODUCTION

The International Rugby Board (IRB) transmitted four different nutritional supplements to the Swiss Laboratory for Doping Analyses (LAD) and mandated it to investigate the presence of any doping substances.

### SAMPLES CHARACTERISTICS

LAD Code	Name	Batch number	Manufacture date	Expiration date
533/13	Evox® advance nutrition <b>5x formidable mass</b>	102914	09/2014	09/2016
534/13	Evox® advance nutrition <b>Cyto crank</b>	115714	07/2014	07/2016
535/13	Evox® advance nutrition <b>100% whey protein</b>	232914	09/2014	09/2016
536/13	Evox® advance nutrition <b>BCAA stack</b>	154714	07/2014	07/2015

All the supplements samples were still sealed at reception in the laboratory.

### RESULTS

After analyses it has been possible to determine that none of the transmitted supplements samples contains Performance-enhancing drugs.

Epalinges, January 29<sup>th</sup>, 2015

Martial Saugy, Prof.  
Laboratory Director

## Preliminary Observations

### 1. Samples identification

#### 1.1. Samples received on December 12<sup>th</sup> 2014

LAD Code	Name	Batch number	Manufacture date	Expiration date
C_1	Evox <sup>®</sup> advance nutrition <b>5XL formidable mass</b>	102914	09/2014	09/2016
C_2	Evox <sup>®</sup> advance nutrition <b>Cyto crank</b>	115714	07/2014	07/2016
C_3	Evox <sup>®</sup> advance nutrition <b>100% whey protein</b>	232914	09/2014	09/2016
C_4	Evox <sup>®</sup> advance nutrition <b>BCAA stack</b>	154714	07/2014	07/2016

The four samples were sealed at reception.

#### 1.2. Samples received on February 9<sup>th</sup> 2015

LAD Code	Name	Batch number	Manufacture date	Expiration date
T_1	Evox <sup>®</sup> advance nutrition <b>5XL formidable mass</b>	161913	09/2013	09/2015
T_2	Evox <sup>®</sup> advance nutrition <b>Cyto crank</b>	206813	08/2013	08/2015
T_3	Evox <sup>®</sup> advance nutrition <b>100% whey protein</b>	1411113	11/2013	11/2015
T_4	Evox <sup>®</sup> advance nutrition <b>BCAA stack</b>	115513	05/2013	05/2015

The four samples were unsealed at reception.

## 2. Control of the original weight

### 2.1. Samples received on December 12<sup>th</sup> 2014

LAD Code	Indicated weight (g)	Measured total weight with package (g)
C 1	2000	2500
C 2	800	934
C 3	500	529
C 4	300	370

### 2.2. Samples received on February 9<sup>th</sup> 2015

LAD Code	Indicated weight (g)	Measured total weight with package (g)
T 1	4200	4300
T 2	800	841
T 3	1000	565
T 4	300	296

## 3. Samples state at reception for second shipment

Samples T\_3 was broken at reception and the powder scattered into the Parcel



*General illustration*

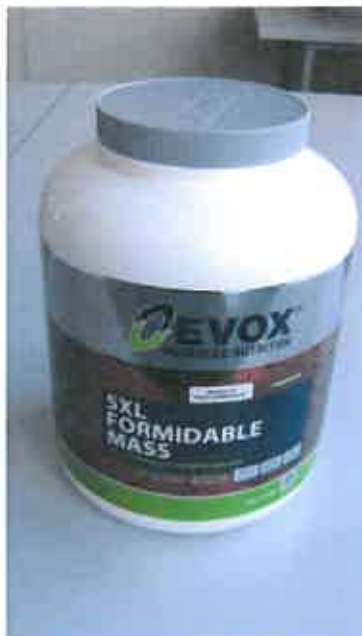


*T\_3 illustration*

As there is still powder into the samples, an analysis of T\_3 will be possible.

#### **4. Comparison between samples received on December and samples received on February**

##### **4.1. 5XL formidable mass**



*C\_1*



*T\_1*

#### 4.2. Cyto crank



C\_2



T\_2

#### 4.3. Cyto crank



C\_2



T\_2

#### 4.4. BCAA stack



*C\_4*



*T\_4*



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## Analysis of nutritional supplements

### INTRODUCTION

The International Rugby Board (IRB) transmitted four different nutritional supplements to the Swiss Laboratory for Doping Analyses (LAD) and mandated it to investigate the presence of any doping substances.

### OBSERVATION

The four supplements parcels were unsealed at reception. Moreover the "Evox® advance nutrition 100% whey protein" parcel was broken at the upper part. As there was still powder inside the parcel, it has been decided to analyse it anyway.

### SAMPLES CHARACTERISTICS

LAD Code	Name	Batch number	Manufacture date	Expiration date
T_1	Evox® advance nutrition <b>5XL formidable mass</b>	161913	09/2013	09/2015
T_2	Evox® advance nutrition <b>Cyto crank</b>	206813	08/2013	08/2015
T_3	Evox® advance nutrition <b>100% whey protein</b>	1411113	11/2013	11/2015
T_4	Evox® advance nutrition <b>BCAA stack</b>	115513	05/2013	05/2015

All the supplements samples were still sealed at reception in the laboratory.

### RESULTS

After analyses it has been possible to determine that **none of the transmitted supplements samples contains Performance-enhancing drugs.**

Epalinges, February 24<sup>th</sup>, 2015

Martial Saugy, Prof.  
Laboratory Director

Printed from: *Clarke's Analysis of Drugs and Poisons*, London: Pharmaceutical Press, Electronic version, 2005.

### Naphthol-sulfuric acid

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This test should be carried out in conjunction with the sulfuric acid test.

#### Reagent

Mix 1 g of naphth-2-ol with 40 mL of *sulfuric acid* and heat in a water-bath at 100°, with occasional stirring, until the naphth-2-ol is dissolved.

#### Method

Mix the sample with 1 mL of the reagent, heat in a water-bath at 100° for 2 min and note any colour produced. Cool, add 1 mL of water and note the colour again.

#### Indications

A range of colours is obtained with steroidal structures (see Table 19.24). A positive response to this test combined with a positive response to the sulfuric acid test is indicative of the presence of a steroid.

Compounds other than steroids that give colours with this test include cloral hydrate and chloramphenicol (brown-yellow), starch and tartaric acid (green).

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JARU PROCEDURE 1 of 3



Printed from: *Clarke's Analysis of Drugs and Poisons*, London: Pharmaceutical Press. Electronic version, 2015.

### Sodium nitroprusside-acetone

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#### Reagents

1. Dissolve 2 g of sodium nitroprusside in 5 mL of water and add 45 mL of methanol.
2. 2% (w/v) sodium carbonate.
3. Acetone.
4. 10% Acetaldehyde.

#### Method 1

Add one drop of solution 1 followed by one drop of solution 2 to 3 to 4 mg of sample dissolved in solution 3 on a spot plate. A purple colour is indicative of amphetamine. The LOD is 30 µg.

#### Method 2

Add one drop of solution 1 followed by one drop of solution 4 to 1 to 2 mg of sample dissolved in solution 3. An immediate blue colour is indicative of metamfetamine. The LOD is 5 µg.

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JARU PROCEDURE 2 of 3

Printed from: *Clarke's Analysis of Drugs and Poisons*. London: Pharmaceutical Press. Electronic version, 2005.

### Simon's test (modified sodium nitroprusside test)

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#### Reagent

1. Dissolve 1 g of sodium nitroprusside in 100 mL of water and add 2 mL of acetaldehyde to the solution with thorough mixing.
2. Freshly prepared 2% sodium carbonate in distilled water.

#### Method

Add one drop of solution 1 to the sample, followed by two drops of solution 2.

#### Indications

A dark blue colour indicates a secondary amine [e.g. metamfetamine, ephedrine, 3,4-methylenedioxymetamfetamine (MDMA)] or an unsubstituted heterocyclic amine as its free base. A deep blue colour indicates the presence of metamfetamine. Primary amines [e.g. amfetamine, methylenedioxymetamfetamine (MDA)] yield a slow pink to cherry-red colour.

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DARW PROCEDURE 3 of 3

Extract from DARU letter to the Department of Sports – as received by World Rugby via Sarah Idieva 29 June 2015

**RE: REQUEST FOR RAW ANALYTICAL DATA**

This is in reference to your letter dated 12 May 2015 (SD/A/67 Vol.II) on the above subject.

I note that in another letter dated February 4, 2015, SD/A/67 Vol.I (119), you indicated that the retained samples we released to you were intended for testing in an accredited laboratory. What was the outcome of the tests?

I wish to state that our previous letter dated 7 April, 2015 adequately addresses the questions raised in the current request. Furthermore, the preliminary report issued in April 2014 indicates the positive and negative controls used during the tests (copy attached). Normally, we issue certificates of analysis or reports, but not copies of workbooks. I have reviewed our previous correspondence and observed that what we have provided so far is sufficient.

It is noteworthy that we operate according to internationally accepted practices and standards. Out of specification (OOS) investigations is therefore part of our standard operating procedures.

Thank you.



## **Food supplement**

### **SCIENTIFIC REPORT**

#### ***Food supplement contamination with steroids***

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Epalinges, July 7, 2015



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## 1 Case background and aims

The assessment of the food supplements contamination with steroids detected by the Drug Analysis and Research Unit (DARU) on December 2013 was conducted on request of the World Rugby by the Swiss Laboratory for Doping Analyses (LAD).

After allegation about Kenyan athletes using prohibited substances, Kenyan government decided to mandate a taskforce to investigate doping on among diverse sports.

Regarding rugby, the taskforce was informed that the 7s coach was providing supplements that trade by the name 'Evox'. Samples of these supplements were analysed by DARU. In a report, DARU stated that the four samples they received were positive for Steroids<sup>1</sup>.

The taskforce stated that the Kenyan Rugby Union (KRU) and specific officials were in contravention of S.2.6.2 (*Possession of a Prohibited Substance or a Prohibited Method by an Athlete Person*) of the World Anti-doping Code. Further they also stated that there were strong suggestions that the coaches violated S. 2.8 (*Administration or Attempted Administration to any Athlete In-Competition of any Prohibited Substance or Prohibited Method, or Administration or Attempted Administration to any Athlete Out-of-Competition of any Prohibited Substance or any Prohibited Method that is prohibited Out-of-Competition*).

On the basis of that report, World Rugby decided to investigate the presence of steroids in the four supplements: Evox® Advance Nutrition 5XL formidable mass, Evox® Advance Nutrition Cyto crank, Evox® Advance Nutrition 100% whey protein and Evox® Advance Nutrition BCAA stack. For that purpose, they mandated the Swiss Laboratory for Doping Analyses (LAD) to:

1. Analyse four identical sealed samples of the supplements in question provided by South Africa Institute for Drug-Free Sport (SAIDS).
2. Confirm the results on the four supplements analysed by DARU.
3. Give an expert opinion on the 'validity' of the analysis done by the DARU laboratory.

---

1. Appendix VI from the Anti-doping Taskforce final report.



## 2 Material and Methods

The first batch with the intact supplements was transmitted to the LAD on 17<sup>th</sup> of December 2014 and a second batch with the supplements analysed by DARU was received on 9<sup>th</sup> of February 2015.

For both batches the same Methodology was applied.

### 2.1 Sample preparation

After homogenization, an aliquot of 1 g of supplement was dissolved in 5 mL of methanol containing methyltestosterone at 10 µg/mL used as internal standard (IS) with the support of a vortex generator. After centrifugation 500 µL of the solution was transferred in a tube and evaporated to dryness, reconstituted in 5 mL of potassium hydroxide (KOH) 0,1 M and 5 mL of n-pentane, homogenized and centrifuged. The organic phase was transferred in a new tube with addition of 2 mL of Methanol 95%, homogenized and centrifuged again. Following that the organic phase was transferred and evaporated to dryness.

The analyte was treated with 100 µL of N-methyl-N-trimethylsilyltrifluoroacetamide (MSTFA) / Ammonium iodide (NH<sub>4</sub>I) / Ethanthiol and heated at 60°C for 20 min.

### 2.2 Analytical methods

The quantification for the steroid profile was performed on a Hewlett Packard 6890 GC system Plus gas chromatography system coupled to a Hewlett Packard 5973 Mass Selective Detector mass spectrometer.

The GC was equipped with an Agilent DB-5MS capillary column (30m x 0.25mm IDx0.25µm film thickness). Helium was used as a carrier gas at a flow rate of 1.2ml/min. The injector temperature was 280°C with constant pressure in splitless mode. The initial column temperature was set at 210°C and then the temperature increased at a rate of 10°C/min to 300°C, then 5°C/min till 320°C, 5 min.

The MS acquisition parameters were done in scan mode (50.0 and 670.0). The MS source was settled at 230°C and the MS quadrupole at 150°C.

### 2.3 DARU methods

DARU used preliminary spot tests, "Naphthol-sulfuric acid", "sodium nitroprusside-acetone" and/or "Simon's test". All these tests are described in "Clark's Analysis of Drugs and Poisons", third edition in chapter 19.

### 3 Results

#### 3.1 First batch with the identical supplements

The samples were received on 17<sup>th</sup> of December 2014 from SAIDS. All the supplements were still sealed.

LAD Code	Name	Batch number	Manufacture date	Expiration date
C_1	Evov <sup>®</sup> advance nutrition 5XL formidable mass	102914	09/2014	09/2016
C_2	Evov <sup>®</sup> advance nutrition Cyto crank	115714	07/2014	07/2016
C_3	Evov <sup>®</sup> advance nutrition 100% whey protein	232914	09/2014	09/2016
C_4	Evov <sup>®</sup> advance nutrition BCAA stack	154714	07/2014	07/2016

After analyses it has been possible to determine that none of the transmitted supplements samples contains Performance-enhancing drugs.

#### 3.2 Second batch with the supplements analysed by DARU

The samples were received on 9<sup>th</sup> of December 2015 from SAIDS. The four supplements parcels were unsealed at reception. Moreover the "Evov<sup>®</sup> advance nutrition 100% whey protein" parcel was broken at the upper part. As there was still powder inside the parcel, it has been decided to analyse it anyway.

LAD Code	Name	Batch number	Manufacture date	Expiration date
T_1	Evov <sup>®</sup> advance nutrition 5XL formidable mass	161913	09/2013	09/2015
T_2	Evov <sup>®</sup> advance nutrition Cyto crank	206813	08/2013	08/2015
T_3	Evov <sup>®</sup> advance nutrition 100% whey protein	1411113	11/2013	11/2015
T_4	Evov <sup>®</sup> advance nutrition BCAA stack	115513	05/2013	05/2015

After analyses it has been possible to determine that none of the transmitted supplements samples contains Performance-enhancing drugs.





### 3.3 Results from DARU

Sample Code	Sample	Test for Steroids
Positive control	Betamethasone valerate	Positive
Negative control	Chloroform	Negative
533/13	Evon <sup>®</sup> Advance Nutrition. BNO : 115513; Mfg: 05/2013 Exp: 05/2015	Positive
534/13	Evon <sup>®</sup> Advance Nutrition BNO : 161913; Mfg: 09/2013 Exp: 09/2015	Positive
535/13	Evon <sup>®</sup> Advance Nutrition BNO : 1411113; Mfg: 11/2013 Exp: 11/2015	Positive
536/13	Evon <sup>®</sup> Advance Nutrition BNO : 206813 Mfg: 08/2013 Exp: 08/2015	Positive

DARU used preliminary spot tests that were only qualitative and not confirmatory.

## 4 Discussion

### 4.1 Results from LAD

The chromatography coupled with mass spectrometry (GC/MS) is the gold standard for detection of steroid validated by peer reviews.

The method used has been developed especially for the supplements and is inspired from the method used in many Anti-Doping laboratories.

To avoid any problem during the sample preparation, an internal standard is added to the samples. Besides that positive and negative controls are also included to the analyses to control any problem during the sample preparation.

### 4.2 Results from DARU

Spot tests are only preliminary tests and require additional confirmation testing. This information is also indicated in the introduction of chapter concerning the colour tests in "Clark's Analysis of Drugs and Poisons": *"It follows that colour tests are only an indication of presence of a compound or class of compounds and that tests must be confirmed by more specific methods. This is especially important in forensic cases!"*

### 4.3 Comparison between LAD and DARU results

The method used in the LAD is considered as the gold standard for analytics in forensic science. It is validated concerning specificity and selectivity. In addition, the presence of negative and positive controls also insures that validity of the sample preparation.

On the other hand, colour tests are considered as indicative tests. They are only used to indicate the possible presence of substances, but not as reliable tests. They are known to have potential false positive and /or false negative. These tests must imperatively be confirmed by assays based on the use of chromatography and mass spectrometry to obtain reliable results.

Finally, only the GC/MS results are accepted by a court.



## 5 Conclusions

Based on the results and the techniques used by LAD and DARU, we can answer to the questions asked by World Rugby.

1. Analyse four identical sealed samples of the supplements in question provided by South Africa Institute for Drug-Free Sport (SAIDS).

**No prohibited substance was identified in the four identical sealed supplements provided by SAIDS.**

2. Confirm the results on the four supplements analysed by DARU.

**It has not been possible to confirm the presence of steroids in the supplements which were analysed by DARU**

3. Give an expert opinion on the 'validity' of the analysis done by the DARU laboratory.

**Based on the techniques used by DARU, it is reasonable to conclude that they should have performed confirmation tests before giving a positive results for the four supplements of interest.**

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Epalinges, 7<sup>th</sup> of July 2015