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DECISION OF THE ANTI-DOPING PANEL

In the Matter
of
the Anti-Doping Violation of
Jason Lyon (Canada)

Panel Members:	Mr. John A. Faylor, Attorney-at-Law, Frankfurt am Main, Germany (Chairman) Professor Luigi Fumagalli, Professor and Attorney-at-Law, Milan, Italy Dr. Lucienne Attard, Doctor of Medicine and Surgery, Chairperson of the Anti-Doping Commission (NADO) of Malta
Archer:	Mr. Jason Lyon, represented by his legal counsel, Dr. Emir Crowne, Mississauga, Ontario, Canada
World Archery Federation:	represented by its Secretary General, Mr. Tom Dielen, and its Anti-Doping Administrator, Mr. Pedro Goncalves

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Hearing Date:	8 May 2016
Time:	15.00 CET to 18:15 CET
Place:	The Panel Members, Mr. Faylor and Prof. Fumagalli, the Anti-Doping Administrator, Mr. Pedro Goncalves, his assisting colleague, Mr. Davide Delfini and the General Secretary of World Archery, Mr. Tom Dielen, attended the hearing per video/tele- conference from the Headquarters of the World Archery Federation, Maison du Sport International, Lausanne, Switzerland. Dr. Attard attended the hearing per teleconference from her office in Malta. Dr. Crowne, his colleague, Ms. Amanda Fowler, attended the hearing from Toronto, Canada, and Mr. Lyon attended the hearing per video/teleconference from Winnipeg, Manitoba, Canada.

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The witnesses Prof. Martial Saugy provided testimony by teleconference in Lausanne, Dr. Irene Mazzoni by teleconference from Montreal, Canada, and Professor Charles S. Wong provided testimony by teleconference from Winnipeg, Canada.

Archery Canada, represented by its President, Mr. Al Wills, its Executive Director, Mr. Scott Ogilvy, and Mr. Alan Brahmst, Advisor, attended the hearing by teleconference from Ottawa and Toronto as observer.

I. THE PARTIES

1. Mr. Jason Lyon ("**the Archer**" or "**Mr. Lyon**") is a Canadian archer and member of Archery Canada. He earned silver medals at the 2007 Pan American Games in Rio and at the 2010 Commonwealth Games in Dehli and competed in the 2008 Summer Olympics in Beijing.

2. Archery Canada is the national governing body for the sport of archery in Canada of which the Archer is a member.

3. World Archery Federation ("**WA**") is the international federation responsible for the sport of archer worldwide. Archery Canada is a Member Association of WA.

II. FACTUAL BACKGROUND

4. The Archer competed in the Arizona Cup held in Phoenix, Arizona between 06 April 2016 and 10 April 2016.

5. On the morning of 9 April 2016, Mr. Lyon underwent doping control and submitted a urine sample. He disclosed on the Doping Control Form that he had taken the substance Amoxicillin (1 pill) and also Caffeine (1 pill) on that day. A Therapeutic Use Exemption (TUE) had not been and was not in the process of being granted to the Archer at this time. He has never tested positive for any Prohibited Substance during his sporting career.

6. On 4 May 2016, WA notified Mr. Lyon and Archery Canada that the WADA-accredited laboratory in Salt Lake City, Utah determined that the A-Sample contained the substance oxilofrine. Oxilofrine is a Prohibited Substance classified in the 2016 Prohibited List as a Class S6.b) Specified Stimulant.

7. The Archer was informed in the notification of the potential consequences of the violation,

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namely automatic disqualification, including forfeiture of any medals, points and prizes pursuant to Art. 36.9 and Art. 36.10.1 of the WA Anti-Doping Rules (the "**Rules**")[1] and the possibility that he could be sanctioned with ineligibility. He was also informed of the possibilities for eliminating or reducing the period of ineligibility provided in Articles 36.10.4, 36.10.5 and 36.10.6 of the Rules.

8. Mr. Lyon requested the analysis of the B-Sample. This took place in the same WADA-accredited laboratory in Salt Lake City on 17 May 2016. The B-Sample analysis results confirmed the results of the A-Sample.

III. PROCEDURE

9. On 13 May 2016, counsel for the Archer requested an expedited hearing in light of upcoming qualification competitions for the Olympic Games in Rio.

10. On 19 May 2016, following the confirmation of his B-Sample, the Archer was notified by the Secretary General of WA that the Anti-Doping Administrator (the "**Administrator**") had decided to provisionally suspend him from national and international competition pursuant to Art. 36.7.9.2 of the WA Anti-Doping Rules.

11. On 25 May 2016, the Respondent received the full Laboratory Documentation ("**DocPac**"). Following receipt of the DocPac, the Archer admitted the anti-doping rule violation on the same day and requested an expedited hearing to determine the appropriate sanction.

12. On 26 May 2016, the WA Secretary General furnished the Archer and the Anti-Doping Administrator a "*Provisional Timetable to Hearing*". Both were granted a deadline of 1 June 2016 for the submission of statements/explanations and the announcement of any evidentiary measures, e.g. any witness and expert testimony to be provided at the hearing.

13. In the same notification, the Archer and the Administrator were informed that a tentative date was set for the hearing on 8 June 2016. Counsel for the Archer was expressly informed of the Archer's right to a fair hearing and the provisions of Art. 36.8.1.3 through Art. 36.8.5 of the WA Anti-Doping rules which describe this right.

14. On 1 June 2016, the Archer submitted his written Explanatory Statement regarding the alleged anti-doping violation. On the same day, the Administrator submitted his Summary of Relevant Facts and stated his "*Opinion*" regarding the nature and scope of the alleged violation.

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1 Capitalized terms in this decision have the same meaning as those found in the WA Anti-Doping Rules.

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15. On 6 June 2016, following receipt of the Archer's Explanatory Statement, the Archer was appraised by the Panel of the chief areas in which questions from the Panel could be expected.

16. On 3 June 2016, the WA Secretary General issued the draft Order of Procedure to the Parties which notified the Parties, *inter alia*, of the constitution of the Panel, the time and place of the hearing, the location of the Panel member, Dr. Attard in Malta, for the teleconference, a statement of the "*Principles for a Fair Hearing*" which were to apply, and a preliminary schedule setting out the "*Anticipated Course of the Hearing*."

17. The expedited hearing took place on 8 June 2016 by video-/teleconference in the configuration set forth in the preamble of this decision (page 1). The Panel issued the dispositive (operational) portion of the decision on 11 June 2016 as requested by the Archer in view of the upcoming qualification competitions on 13 June 2016 in Antalya.

IV. SUBMISSIONS OF THE PARTIES

A. Submissions of the Archer

18. In his Explanatory Statement of 1 June 2016, the Archer asserted that he had never tested positive for any prohibited substances in the past.

19. He further submitted that on 9 April 2016 he woke up at 5:30am in his Phoenix hotel. He consumed a bottle of water (sealed), a caffeine pill and amoxicillin. He and his teammate Hamilton Nguyen went down to the hotel main floor for breakfast at 5:55am. He ate eggs (likely powdered eggs) and an orange that he bought from the nearby WalMart and drank tea (likely green tea).

20. At breakfast, he was joined by two other teammates and a coach. He claims that he never left his plate alone, even when his teammates joined the table. He went upstairs around 6:20am to have a shower and get ready to leave for practice before competition. He brought a Quest bar and a few of the oranges which he had purchased at WalMart with him.

21. Mr. Lyon was approached to provide the urine samples at 10:15am. He drank water, Gatorade (both sealed), and ate a Quest bar and an orange. He asserts that he had consumed nothing else. In corroboration thereof, Mr. Lyon submitted a written statement from Mr. Hamilton Nguyen as Appendix K of his Explanatory Statement.

22. In further corroboration of his submission, Mr. Lyon submitted a series of text messages to his counsel (Dr. Crowne) dated 21 May 2015. In these messages, he stated that, due to an illness,

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later identified in the hearing as a "*strep throat*", he ingested no vitamins at all and used no inhalers. Instead, he consumed oranges and "*a mix of lemon and lime, raw fruit, not a powder, kind of like a citrus fruit salad.*"

23. Counsel for Mr. Lyon announced in the Explanatory Statement that, at the hearing, in addition to the Archer, Dr. Charles Wong, Professor of Ecotoxicology at the University of Winnipeg and the holder of the prestigious Canada Research Chair in Ecotoxicology, "*will testify that certain oranges consumed by the Respondent could be a likely source of the oxilofrine.*"

24. Counsel for Mr. Lyon submitted ("*in the interest of time*") Dr. Wong's summarial findings as an Appendix to the Explanatory Statement and announced that he would expand upon these findings during his oral testimony, the findings having been revealed to the Archer and himself only the evening before, on 31 May 2016.

25. The summarial findings of Dr. Wong contained in Appendix D of the Archer's Explanatory Statement are quoted in their entirety as follows:

The University of Winnipeg
31 May 2016

Dr. Emir Crowne
c/o K.R. Lalla & Co.
41 Edward St.
Port-of-Spain, Trinidad, W.I.

Dear Dr. Crowne:

This memo is to note that my laboratory has analyzed several samples submitted to us by Mr. Jason M. Lyon for oxilofrine, via ultra-high performance liquid chromatography-tandem mass spectrometry. We confirm the presence of oxilofrine in extracts from Satsuma oranges that Mr. Lyon purchased from a local Wal-Mart. According to information provided to me by Mr. Lyon, these are the same type of oranges that he purchased from a Wal-Mart in Phoenix, and consumed during the Arizona Cup as a result of illness.

Sincerely,
Charles S. Wong, Ph.D

26. Counsel for Mr. Lyon then set out in his Statement the Archer's requests for relief:

- *That the two (2) year ban be eliminated in its entirety, as he [the Archer]*

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bears no fault for the presence of oxilofrine in his sample(s) due to the unforeseeable and, perhaps immitigable presence of oxilofrine in the oranges he consumed; or, in the alternative,

- *The Respondent [the Archer] seeks a reprimand and no period of ineligibility, as his degree of fault in the circumstances is at the lowest end of the spectrum, as the unforeseeable and, perhaps, immitigable presence of oxilofrine in the oranges he consumed was (by definition) not intended to enhance his sport performance.*

27. Citing the definition of the term "*intentional*" in Art. 10.2.3 of the Rules, he further submited that "*World Archery Federation bears the onus of proving the Athlete's intent to commit the anti-doping rule violation, the elements needed to sustain the violation are: (a) conduct which the Athlete knew constituted a violation; or (b) significant risk that the conduct might constitute a violation; and (c) manifest disregard of that risk.*"

28. Mr. Lyon further submited in his Statement that the "*crux of this matter is the source of the oxilofrine*". The only "*credible source of that Specified Substance was indeed the oranges he consumed to combat his illness*." Moreover, he asserts that

> *"This is not a situation of a contaminated product, cold medicine or nutritional product. It involves the mere consumption of oranges. There is no inherent risk in consuming such fruit. There is no label to read, or medical personnel to consult."*

29. In support of his position, he referred to *Burke v. Cycling Canada Cyclisme*, SDRCC 13-0206, *Flavia Oliveira v. United States Anti-Doping Agency*, 2010/A/2107, *Powell v. JADCO*, CAS 2014/A/3571 and *Simpson v. JADCO*, CAS 2014/A/3572, copies of which he submits as Appendices to his Explanatory Statement.

B. Submission of the Anti-Doping Administrator

30. In his "*Opinion*" dated 1 June 2016, the Anti-Doping Administrator pointed out that

> *"... for purposes of anti-doping rule violations involving the presence of a Prohibited Substance (or its Metabolites or Markers), the World Anti-Doping Code adopts the rule of strict liability. Under the strict liability principle, an Athlete is responsible, and an anti-doping rule violation occurs, whenever a Prohibited Substance is found in an athlete's Sample. The violation occurs whether or not the Athlete intentionally or unintentionally used a Prohibited Substance or was negligent or otherwise at fault. However, the Athlete then has the possibility to avoid or reduce sanctions if he or she can demonstrate that he or she was not at fault or*

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significant fault."

31. Confirming that the Prohibited Substance identified in the Archer's samples is a Specified Substance, and based upon his knowledge of the violation to date, the Administrator is of the opinion that the Archer should be sanctioned as follows:

- Two (2) year period of ineligibility as a consequence of the violation of Art. 36.2.1 of the Rules, in accordance with Art. 36.10.2.2 of the Rules;
- Disqualification of the results obtained at the competition in connection with the in-competition test in accordance with Art. 36.9 including forfeiture of medals, points and prizes;
- Some or all sport-related financial support or other sport-related benefits received by the Archer will be withheld by WA in its National Federations, in accordance with Art. 36.10.12.4 of the Rules.

32. The period of provisional suspension, which started on 6 May 2016, should be credited against the total period of ineligibility eventually determined by the Panel.[2]

33. The Administrator placed his opinion regarding the sanctions under the following condition: Not having had the opportunity to review the explanations given in the Archer's written submission or to be given at the hearing, he stated that he may "*reconsider*" his opinion.

V. THE HEARING

34. On 7 June 2016 at 11.19am and within the deadline set for the submission of additional information and the naming of witnesses, the Administrator announced that he would provide the testimony of Dr. Martial Saugy of the WADA-accredited Swiss Laboratory for Doping Analysis in Lausanne or, alternatively, in the event that Dr. Saugy would not be available on short notice, "*a representative from this WADA-accredited laboratory in Lausanne*."

35. In the same communication, he announced the testimony of Dr. Olivier Rabin of the WADA Scientific Department in Montreal, Canada or, alternatively, a representative of the WADA

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2 The Administrator is mistaken in citing 6 May 2016 as the starting date of the suspension. The notification of the provisional suspension took place on 19 May 2016. In the notification, it is specifically stated that "*you will be provisionally suspended from national and international competitions, from the date you will receive this notification until this procedure has been completed*". The Order of Procedure also incorrectly states the commencement date of the suspension on 6 May 2016.

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scientific department. In announcing the subject matter of the testimony, the Administrator explained that both of the named witnesses or their substitutes, "*are required to give their opinion on the analytical findings and the experts opinion presented by the athlete*".

36. Dr. Martial Saugy provided testimony during the hearing on the following day, 8 June 2016, per teleconference. The expert witness, Dr. Olivier Rabin, was at this time in China and could not be reached. The Administrator then announced prior to the hearing on 8 June 2016 that Dr. Irene Mazzoni, Senior Manager of the Science Department of WADA in Montreal, Canada, would substitute for Dr Rabin.

37. Counsel for the Archer, citing the passing of the deadline for the naming of witnesses on 7 June at 12.00 CET, objected to the testimony of Dr. Mazzoni, stating that "*the Federation cannot simply put a placeholder that hitherto unknown colleagues may testify*."

38. At the opening of the hearing, the Panel issued its ruling that the testimony of Dr. Mazzoni would be taken over the objection of the Archer. The Panel cited the inability of the Administrator to reach Dr. Rabin in China on such short notice, the fact that the possibility of a representative in place of Dr. Rabin had been announced by the Administrator and that the expert witness would not be speaking for himself, but rather for the WADA Scientific Department. Moreover, the Archer would not be impaired in his right to cross-examine the expert witness.

39. The Chairman of the Panel then proposed to the Parties that, on the basis of the Panel's past experience, it would be beneficial for the Panel, if all of the experts would be present during the taking of the expert testimony, thus forming an expert panel. Following the questions and answers of the Panel and the Parties to each of the experts, the experts would then have the opportunity to question each other regarding the subject matter of their respective testimonies.

40. The Administrator raised no objection to this proposal. It was, however, objected to by the Archer's counsel who pointed out that the Panel had sufficient time to announce this proposal prior to hearing. If the proposal would now be accepted, the Archer would be deprived of its right to prepare his own witness properly. Following this objection, the Panel ruled in favor of the Archer and the proposal was then retracted.

41. The Administrator then proceeded to make his opening statement, repeating the position set out in his written Statement. He repeated his request for a two year period of ineligibility.

42. Counsel for the Archer was then given opportunity to deliver his opening statement. He emphasized that Mr. Lyon had promptly admitted the violation and the presence of oxilofrine. The purpose of the hearing was to set an appropriate sanction. The Archer requested a

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complete elimination of the sanction or its reduction to the "*lower end of the sanctioning range, even to the issuance of a mere reprimand.*"

43. The Panel then proceeded to hear the testimony of Dr. Saugy. His testimony can be summarized as follows:

- Dr. Saugy stated his credentials. He is Director of the WADA-accredited Swiss Laboratory of Doping Analysis in Lausanne.

- In response to the question whether oxilofrine is a natural substance which is produced by the orange or whether it is a synthetic substance which is introduced from outside, Dr. Saugy stated: To his knowledge, oxilofrine is not a natural compound. It is methylsynephrine. This is a synthetic component which is made artificially. It is known to be added to food and sport supplements.

- He continued: In Switzerland, it is not illegal to add oxilofrine to a supplement used outside of sports. Dr. Saugy could not answer the question whether it is prohibited by the FDA (Food and Drug Administration) in the U.S. It is not considered a medication.

- Dr. Saugy confirmed that he is unaware of any publication which addresses the question whether gas or liquid chromatography performed on fruits or vegetables has detected the presence of oxilofrine. For this reason, he is "*very skeptical*" regarding claims of the presence of oxilofrine in oranges.

- He stated that he is aware of the presence of synephrine in organic products. It would, however, be "*very bizarre to have an enzymatic process either in the human body or even in a plant to methylate, to add methyl groups to the synephrine,*" to produce methylsynephrine, otherwise known as oxilofrine. He stated that "*it is well known in plant chemistry that methylation of any indigenous products is not existent.*"

- In response to a question from the Panel, Dr. Saugy states that when the two methods of gas or liquid chromatography are used together with mass spectrometry the possibility of producing a false positive is minimal. The probability that the oxilofrine comes from the synephrine is therefore very low, if not non-existent. He has not, however, been provided any information regarding the methodology used by Mr. Lyon's expert to establish the presence of oxilofrine.

- In response to Dr. Crowe's question whether the 200ng of oxilofrine detected in the

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Archer's urine would have any sporting benefit, Dr. Saugy stated that this is very hard to answer. There are too many factors involved with regard to the intake and effect of the substance on the individual's kinetic performance, even if only a trace is found in the urine of the athlete. He states, "*this is, however, not a small trace in the Archer's urine. It is still not possible to find a correlation between the amount of the concentration and its effect. The question is impossible to answer in terms of its pharmacokinetic effect.*"

- When asked if, assuming that the intake of the substance occurred on the same day as the test, would the amount of the concentration detected give any indication of the quantity of the intake, Dr. Saugy responded that the concentration detected would not indicate a massive dosage of oxilofrine. Dr. Saugy would place a "*massive dosage*" of oxilofrine at 700+ mg and, in this case, there could be a concentration found in the urine of several micrograms, i.e., several thousand nanograms per m/l in the urine, if the urine sample were taken on the same day.

- Assuming the dosage was in the form of a medically used tablet of 16 or 32 mgs of oxilofrine, Dr. Saugy speculates that the concentration found in the athlete's urine within the peak time of between two to five hours after intake would be several mgs per m/l. It would decrease rapidly to nanograms so that after 24 hours one would have several hundred nanograms, maybe 200 ngs, more or less. This could be the case if a tablet of 16mg or 32mg would have been taken 24 or more hours before the sample collection. Full elimination of the substance would take generally take 28 to 72 hours.

- In response to further questions regarding the pharmacokinetic effect of oxilofrine, Dr. Saugy emphasizes that it is impossible to make a judgment in view of the scope of factors which affect the excretion in the individual athlete. This would be different if the substance would be measured in the blood, because blood is the chief deliverer of the pharmacokinetic effect to the body. Urine is an excretion process and it is therefore not possible to estimate the effect with regard to any concentration in the urine.

44. The Panel then heard the testimony of Dr. Mazzoni, Senior Manager of the WADA science department in Montreal, which can be summarized as follows:

- In response to the Panel's question regarding the nature of oxilofrine and how it could be found in oranges, Dr. Mazzoni stated that it is really debatable whether it is a natural product at all. There were reports that it was present in a plant called Acacia Rigidula, but when laboratories analyzed this plant, there was no trace of oxilofrine.

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Even the FDA more recently, several months ago, issued a warning that oxilofrine was not considered a natural product or a vitamin or a nutritional supplement. Whether oxilofrine can be present in an orange or in a bitter orange in which synephrine has been reported, the literature does not report any findings of oxilofrine in oranges as a natural substance.

- In response to the question whether a false positive can arise in detecting oxilofrine in oranges when synephrine is really present, Dr. Mazzoni responded that this is highly unlikely. Doping control laboratories have their set procedures and these require that certain peaks must be established for one substance and not for the other. There is no possibility that this confusion could happen.

- With regard to the medical uses of oxilofrine, Dr. Mazzoni cannot state whether oxilofrine has a medical use. This is perhaps the case in some countries, but she cannot state whether it is an approved medication. She states that it is not approved in North America, for example. She confirms that it is incorporated in some food supplements and is considered to be a synthetic product. It is not present in nature. This was the reason for the FDA warning.

- When asked whether she has any knowledge of the use of oxilofrine in agricultural products other than food supplements or medications, Ms. Mazzoni responds that she has no such knowledge.

- Dr. Mazzoni stated that there has been no noticeable increase in the number of oxilofrine cases in the past months.

45. Counsel for the Archer maintained his objection to the testimony of Dr. Mazzoni as substitute for Dr. Rabin and refused to put any questions to the witness Mazzoni.

46. The Panel then heard the testimony of the Archer, Mr. Lyon, as witness. Ms. Amanda Fowler, colleague of Dr. Crowne, proceeded to take the testimony of the Archer. This can be summarized as follows:

- With regard to anti-doping education regarding prohibited supplements and substances, Mr. Lyon stated that there is a requirement to complete a doping education course which is comprised of on-line modules. These must be completed every year. These modules inform about common illegal drugs such as marijuana and similar drugs, supplements and substances. He confirmed that he is familiar with this mandatory drug education system.

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- Mr. Lyon stated that he never received information from the web modules relating to food or fruits, specifically. He confirmed that he has never tested positive and he has been tested many times.

- When questioned about his performance at the Arizona Cup, Mr. Lyon stated that his performance was "*ok*", the first 36 arrows which he shot were "*respectful*", the second set of 36 arrows was not "*all that good*", but there was some wind. On April 9th, the day of the test, he "*did not feel that he performed that well at all.*"

- Mr. Lyon explained that it was probably about April 1st that he first went to the doctor because he had "*a very sore throat and a bad cough.*" The doctor performed a "*strep test*" and concluded therefrom that he had a strep throat. He was then given an amoxicillin prescription by the doctor.

- Upon arriving at his hotel location, he purchased water to combat dehydration. He also went to WalMart nearby to buy things "*for salads and other break-lunches and dinner*". "*We picked up fruit and vegetables and some meat, and that was about it.*"

- Specifically with regard to the fruits purchased at Walmart, Mr. Lyon remembered purchasing two or three limes and lemons, a bag of oranges, some pre-packaged sliced apples, peanut butter as well as a bag of shredded lettuce, cranberries and sandwich meats for sandwich lunches.

- The oranges were packaged in plastic orange mesh with ten to twelve oranges in the bag. He went to WalMart "*two or three times*" in order to buy food. He never bought large quantities, because we had little room in the small refrigerator of our hotel room.

- Upon rising on the morning of April 8th, the day before the test, he took one of his caffeine pills with a full bottle of water. This helped to wake him up. Before going to breakfast, he ate one of the oranges. For breakfast, he had a big plate of powdered eggs along with sausage paddies. After finding a table, he was provided with beverages, coffee, tee, juice and sodas. He took green tea. He sat at the table with several of his teammates and coach. There were two others and the national coach as well at the breakfast table. These persons showed up at various times.

- He never left his plate or his cups on the table unattended before leaving the table to go back up to his room. He never ate during this time and until he went to the field.

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The salad and sandwiches which he had prepared the night before were put into his archery bag pack along with a Quest bar which is just a regular protein bar. When he arrived at the field toward 11:00am, he ate another orange. The water which he drank at the field was sealed in bottles. After his first 36 arrows, he took a short break at which time he ate another orange with his salad. After his 2nd round of arrows, he headed back to the hotel. He ate nothing else while at the field other than his oranges and the salad. The water which he drank on this day was always from sealed bottles which were handed out at the event.

- On the way back from competition on this day to his friend's girlfriend's hotel, where he, together with his friend would spend the evening, he stopped again at WalMart to pick up a roaster chicken, some cole slaw or macaroni salad and a pre-made salad. He left his friend's girlfriend's hotel for his hotel after dinner and a round of video games at about 9:45pm. Before going to bed, he ate another orange.

- On the date of the test on April 9th, he woke up early at about 5:30am, because the start of the competition was at 7:00am or 7:30am. The routine on this morning, including his breakfast, was similar to that of the previous day. The whole team had breakfast quickly, he put on his uniform and loaded the car. He confirmed that upon waking up he consumed a bottle of water together with his caffeine tablet to wake up. He also took his amoxicillin.

- On April 9th, he left for the field probably toward 6:30am. He arrived with his teammates toward 6:45am. He then set up his equipment for the match. During this period until the start of competition at about 7:30am, he drank water fairly regularly and for the match he ate another orange. On this day, he felt better than on the day of his arrival, but still had a very sore throat and was coughing, probably due to the dry environment.

- The competition finished on this morning earlier than anticipated, because he was eliminated in the 2nd match, at about 10:00am or 10:30am. As soon as he started to pack his equipment, he drank more water and ate an orange. He was then notified that he was chosen for the random doping test. In the testing area, he drank another bottle of water and a bottle of Gatorade.

- In answer to questions from the Panel, Mr. Lyon confirmed that he took the amoxicillin up until about April 12th. The dosage was prescribed for the duration of the Arizona competition. He obtained his caffeine tablets from a Rexall pharmacy near his home. He cannot remember the brand name, probably a Rexall generic name. He guesses that the content of the dosage was about 200mg, at least.

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- The oranges were small oranges, about the same size as Christmas oranges. It is correct that he provided Prof. Wong similar oranges to the ones he ate in Arizona to analyze. He managed to contact the WalMart in Arizona and confirmed that the oranges which they stocked at that time were Satsuma oranges. These are grown in California. He then went to the WalMart near his home in Canada and found the same oranges. He purchased these right away and gave them to Dr. Wong the next time he saw him.

- The Quest bars were bought at a health food store where nutritional supplements are also sold. He read the ingredients of the bars and made sure to ask anyone working at the store whether they had ever heard whether Quest bars did not pass doping tests. This was denied. He has been eating Quest bars for about three years. They are part of his staple diet. He has taken protein powders on rush days for post-workout energy. He had not consumed protein powder, however, for several days prior to his positive test.

- When asked by the Panel why he did not also have the lemons and limes tested for oxilofrine which he had eaten while in Arizona, he responded that he never ate enough of the lemons or limes to warrant a laboratory analysis. These were consumed rather early on during the week of his stay in Arizona.

- Mr. Lyon confirmed that he took no other "*medications, syrups or tablets*" other than the amoxicillin for treating his throat. The brand of his protein powder was called Optimal Nutrition, he believes, which also has the slogan "*Safer Sport*" on it. The ingredients of the protein powder he cross-referenced in the global drug database and also checked to make sure that it had the "*Safer Sport*" marking on it.

- When asked why he did not run an analysis on the other things which he had eaten in Arizona, for example, the Quest bars and the caffeine tablets, he responded that he did provide the caffeine pills to Dr. Wong as well the empty containers of his amoxicillin pills for analysis, all of which he had previously consumed, thinking that Dr. Wong would be able to swab the containers. He did not have the protein powder analyzed because he had not consumed any of it a long time prior to his Arizona testing. Dr. Wong came back to him with the results of the other tests. These were all negative.

47. The Panel then heard the testimony of Prof. Charles S. Wong with the Archer's counsel, Dr. Crowne, leading the questioning. His testimony is summarized as follows:

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- Dr. Wong is Professor and holds the Canada Research Chair in Ecotoxicology at the University of Winnipeg. He also holds several secondary appointments as Adjunct Professor at the University of Manitoba and in Costa Rica. He is Associate Editor of the international journal *Environmental Pollution.*

- Before beginning his testimony, Prof. Wong disclosed his relationship to Mr. Lyon. He explained that Mr. Lyon was "*aware of his position*" at the University of Winnipeg. When this matter came up, Mr. Lyon contacted him. Prof. Wong is also an archer and Mr. Lyon has "*helped him considerably*" in pursuing this sport. He confirmed that Mr. Lyon has coached him "*informally*" in the sport. When asked by Dr. Crowne whether his relationship to Mr. Lyon will influence his analysis of the substances, whether he would, directly or indirectly, lie or "*fudge the results*" for the Archer, he responds, "*absolutely not*". If he would do this, it would "*ruin my professional career*".

- In response to the question which substances he analyzed first, he responded that he tested for the chemical oxilofrine, also known as methylsynephrine. He confirmed that he also analyzed the caffeine pills, the amoxicillin container and oranges.

- When asked about the results of the analysis performed on the caffeine pills and the amoxicillin container, he confirmed that "*there was no evidence that oxilofrine was present in either of those samples*."

- With regard to the tests performed on the oranges, Prof. Wong stated that "*we obtained a positive confirmation that oxilofrine was present in the orange samples*."

- Prof. Wong then described the method applied to analyze the oranges. After receiving the orange samples, he and his staff extracted the juice. The juice was removed of pulp. At that point, the samples were divided into several aliquots. "*Two were unspiked and two were spiked with known amounts of oxilofrine in order to measure how much interferences would be present in the sample due to all of the endogenous materials that were in the juice.*"

- All of these samples were then subjected to laboratory procedures in order to validate quality assurance and quality control. To achieve this, the samples were concentrated and to some extent "*cleaned up*" through solid base extraction by applying standard techniques in his laboratory. Then they were analyzed along with calibration curves by ultra-high performance liquid chromatography and mass spectrometry.

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- Prof. Wong stated that his instrumentation is "*basically the same test instrumentation used by the drug lab which analyzed Mr. Lyon's urine.*" He confirms that he has seen the full documentation from Mr. Lyon's urine analysis performed in Salt Lake City.

- Prof. Wong then proceeds to explain that he agrees with the positive findings of the WADA-accredited laboratory that oxilofrine was indeed present in both the A- and B-Samples, based upon his read of the technical aspects of the lab reports.

- On further questioning by Dr. Crowne regarding the concentrations, Prof. Wong was reminded by Dr. Crowne that approx. 200 ngs/ml were detected. He is then asked whether this concentration would be enough to enhance sporting performance. Prof. Wong responded that

  > *"It is difficult to say just from the urine test, because the urine is basically what you collect after it has been processed by the body. Once you take the substance, any substance, it would be distributed within the body, it would be metabolized by various means, it would be excreted through the urine or the feces or both. It would be difficult to conclude just from that data whether or not that would be enough to enhance performance.*"

- Prof. Wong confirmed, however, that 200ng/ml is a "*fairly small amount*". "*If Mr. Lyon had taken a pill, there should be much higher concentrations in the urine.*"

- Asked to clarify what he means by "*much higher concentration*", he was asked whether he means "*a tenfold increase or a hundredfold increase*". Prof. Wong responded, that this would be a "*tenfold, hundredfold and perhaps even more.*"

  > *"It is difficult to say; it depends upon how the body would process the chemical, but the amounts of the concentrations observed in the urine by the drug laboratory, assuming that you agree with those concentrations, is consistent with the ingestion and excretion of a trace amount of oxilofrine."*

- Asked by Dr. Crowne whether he disagrees with the quantities which were arrived at, Prof. Wong responded that he "*disagrees with the methods by which the confirmatory analysis was done*".

- Asked to expand upon this statement, Prof. Wong commented that "*this will take a little bit of time.*" In essence, Prof. Wong explained as follows:

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> "*The way in which the confirmatory was done was that an aliquot of urine, 50 m/l, was put into a reconstitution solution containing appropriate buffers and an internal standard and that was directly analyzed by the chromatography. The amount of oxilofrine was quantified using what is known as internal standardization. That is when a known amount of a specific substance that is not in the sample is added both to the sample and also to the calibration curve in order to quantify and account for variations and signal noise and other corrections which the instruments would do. This is standard analytical chemistry. I disagree with the way the internal standard was done.*"

- When asked whether he could state "*the better way to do it in light of the fact that someone's career is on the line*", Prof. Wong responded that the

> "*gold standard, so to speak, for trace chemical analysis is a version of internal standardization known as isotope dilution. In isotope dilution what is added is actually the exact same chemical except that it is isotopically labeled.*"

- Prof. Wong then proceeded to further elucidate this method on the basis of the carbon molecules. His method, isotopic dilution, "*corrects for instrument variations and signal changes exactly at the point of where the chemical in interest is eluding from the column.*" This is key and critical because both his analysis and well as the analysis used by the Utah Drug Lab both use liquid chromatography-tandem mass spectrometry. In his laboratory, however, he uses both with the liquid chromatography and the tandem mass spectrometry electro-spray ionization "*in order to ionize the chemicals coming out of the column so that they can be measured by the mass spectrometer.*" He continues:

> "*Electrospray ionization is extremely sensitive to the chemistry of what is coming off the sample at the point it is coming out of. Very small variations can change the signal and therefore change the concentrations. This is why it is critical to be able to correct by using the exact same chemical whenever possible at the exact same time that that chemical reaches the ionization chamber, is ionized, and then goes into the mass spectrometer for quantification. This is why in my laboratory, we divided up the samples of the oranges which we received and added oxilofrine to the samples in order to determine how the signal changes we would see just as all the other things in orange juice that were present in the sample which basically are going to be present no matter what*".

- At this point, the Chairman of the Panel interrupted Prof. Wong to point out to the

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Archer's counsel that he had submitted the short written statement from Prof. Wong which the Panel had assumed to be his witness statement. The testimony which is now being taken from Prof. Wong was never mentioned in this witness statement. The Chairman stated that he will permit Prof. Wong to continue his testimony, but he also stated to the record that the Administrator had not been given opportunity to rebut this surprise testimony with the expert witnesses Dr. Saugy and Dr. Mazzoni who were heard earlier in the hearing.

- Dr. Crowne protested the interruption of his witness and the reproach that this testimony came as a surprise. It is prejudicial to Mr. Lyon which is refuted by the Chairman.

- Prof. Wong then resumed by stating that the "*gold standard*" is basically corrections using an analog of the native compound whenever possible to provide for corrections.

- Citing the fact that Prof. Wong's "*gold standard*" accounts for signal changes and instrument variations were not used by the Utah lab, Dr. Crowne asked how much this would have impacted on the results of its findings and how much this variance be, the finding being 200ng/ml. Prof. Wong responded that

  "*without proper characterization of the level of interferences in the sample at the point where oxilofrine eluded from the column, it is impossible to say. I will say, however, that this variation can be considerable.*"

- Prof. Wong was asked by Dr. Crowne following this testimony with regard to the oranges which he analyzed to contain oxilofrine whether the results so found would be consistent at least within the range of the 200ng/ml which were found in the Archer's urine.

- Prof. Wong responds by first prefacing his statement with the proviso that his analysis "*was generally qualitative in nature.*"

  "*Based on the very small amount of time that we had, we basically wanted to determine whether the oxilofrine was present or not present in the oranges. We did take some steps to be able to get a rough idea of what concentrations might be detected in the presence of the calibration curve as well as spiked samples in order to determine signal variations, but the concentration numbers which I can give you for the oranges are subject to considerable uncertainty. This was not intended to be a rigorous quantitative analysis*

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given the limited amount of time his laboratory had."

- Prof. Wong continued:

> "*Your question to me is basically: Is the level of oxilofrine in the oranges sufficient to account for what was observed in Mr. Lyon's urine. My answer is that, given the uncertainty which he just stated, it is possible that that is indeed the case. My best calculations again, given the significant uncertainty in my orange measurements, is that in each orange there was somewhere between 2mg to 9mg of oxilofrine present in the orange. The total amount of oxilofrine collected in Mr. Lyon's urine, assuming 200ng/ml from the lab report and 90ml of urine collected as per standard protocol is approx. 18 mg. So depending upon how many oranges Mr. Lyon ate, and my understanding is that he ate between 4 and 6, those numbers would overlap and could account for the amount of urine which is present. I must preface these statement by stating that it is impossible to determine if that is actually the case given the fact that whatever oxilofrine was ingested would have been metabolized, would have been excreted in various proportions and without that kind of information, it is impossible to state definitively if we truly have a mass balance of oxilofrine*".

- Dr. Crowne then asked whether oxilofrine is naturally found in oranges. Prof. Wong responds: "*To my knowledge, no*". He confirms, however, that oxilofrine was found in the oranges which he tested.

- In response to the question from the Panel whether he generated a documentation package, Prof. Wong responds: "*I wrote the memo that is submitted by Dr. Crowne.*" Asked whether that is all that he has produced in terms of written documentation of his test, Prof. Wong responded: "*I have the original raw data that is present.*" When asked whether he had made this raw data available to Dr. Crowne, he responds: "*I asked Dr. Crowne if he wanted the raw data. He directed me to writing a memo in the interest of time.*"

- Prof. Wong confirmed that, to his knowledge, oxilofrine is not found in oranges. Asked whether he was implying that these oranges were contaminated, i.e. the oxilofrine was coming from an outside source. He responded:

> "*I actually do not know. Is that possible? I suppose. Do I think it is likely, no. It is to my knowledge, -- and I must preface my comments here by saying that I am not a plant biochemist. Oxilofrine is not known to be a natural product in oranges or other citrus plants. That having been said, my review of the*

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literature does suggest that the chemicals that are known to be natural products that are related, things like synephrine and so forth, those particular studies that analyze and studied them, basically used what is used as targeted analysis. They looked for specific compounds that they knew were suspected to be present and would have known in authentic chemical standards purchased and synthesized by the researchers to do so. It is entirely possible that given the fact that we only know so much about natural products and their presence in plants and other materials, this is an active area of research worldwide, that we simply do not know whether oxilofrine is present as a natural product. Mother nature is very good at making things! And this would not be apparent in the studies or even the raw data in something like targeted analysis, because if you don't look for it, you will not find it".

- Asked what portion of his practice concerns itself with urine analysis in conjunction with doping accusation, Prof. Wong answers,

  "In terms of urine analysis, very little. Most of my analysis has been done with environmental samples with waste waters, with soils, with sediments, with samples from biological tissues. I have considerable experience in trace chemical analysis in extremely complex matrices. That would encompass things like urine, it would also encompass such things as natural food products. I am experienced at analyzing for chemicals at the picogram level, which is 1000 times less what you would expect to see in urine and 1000 times less than what the Utah Drug Lab looked for. That is a considerably more challenging set of analyses than drug analyses."

- Asked by the Panel whether he, for the most part, followed the procedures used which the WADA laboratory used, he responded that this is correct. Asked how his procedures differed from the WADA laboratory, Prof. Wong responds:

  "The main areas in which our analyses differed from the WADA analyses is that we used a different type of column than the WADA analysis. So the WADA lab that analyzed Mr. Lyon's urine used what is known as a "reversed-phase column"... we use what is known as a hydrophilic interaction liquid chromatography called heli-column. There is published peer review literature in the drug testing field that uses heli-columns to resolve for oxilofrine and other related compounds. The advantage which a heli-column has is that it can provide better resolution and better peak shape than a p-18 column. We did have a heli-column available and basically some very initial tests suggest that, at least under our instruments and under our conditions, a heli-column provides better performance than a p-18 column, so we used that and we modeled our procedures off of one of these peer-

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reviewed publications."

- Asked what advantage he achieved by using this new procedure, Prof. Wong answered: "*That is pretty much impossible to say, because those types of evaluations were done on a qualitative basis ... In many ways, that is a qualitative judgment call.*"

- Asked whether he considered his test on the oranges to be the first finding of oxilofrine in oranges, Prof. Wong answered, "*yes*". Asked to provide an explanation as to how the oxilofrine "*got into the oranges*", Prof. Wong replies: "*I do not have an explanation.*" The question is re-phrased. Asked whether it is possible that another substance might have given a positive result for oxilofrine which was injected into the orange, Prof. Wong responded:

  > *"Based on the WADA criteria, which are the same criteria which I used, and also similar criteria, similar at least, if not more rigorous, than the WADA criteria that is standard for trace chemical and environmental analysis, the presence of two MRX transitions that are found in the compound with the same ion ratios and the same retention time is basically considered a positive identification. WADA found that in the urine samples for oxilofrine and I found that in the oranges. So that is a positive identification.*"

- The Administrator objected to the situation regarding the unannounced testimony of Prof. Wong. "*We were not prepared for such a complete argument about the confirmation procedures of the Salt Lake City laboratory.*" He pointed out that Prof. Wong does not agree with the confirmatory analysis technique of the Salt Lake City laboratory. He asks whether this concerns only concentration values or does he think this could create a false positive?

- Prof. Wong responded that, based upon his read of the WADA laboratory reports, he does not question that oxilofrine was present in the sample. He does, however, question and disagree with the concentrations and he must note that the labeled substance oxilofrine is commercially available at a price of US$150.00. He looked it up. Given the fact that here athletes' careers and reputations are on the line, he finds it reprehensible that a laboratory would not apply the "*gold standard*" in providing confirmation beyond the shadow of a doubt of concentrations in a confirmatory analysis.

- Asked by the Administrator whether he had found any literature regarding oxilofrine being found in any other environmental situations like water pollution

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and any others, Prof. Wong responds that, to his knowledge, there is no literature on the presence of oxilofrine in environmental matrices. Having said that, this is likely because nobody has ever actually looked for oxilofrine to his knowledge in environmental matrices. Again, with a target analysis, one will only see what one is looking for.

- Asked what Prof. Wong can provide in terms of documentation for the information of the Administrator, he respondend that he can provide details on how the samples were processed. He can provide information on levels of materials, information on chromatograms, area counts, retention times, etc. He will await directions from Dr. Crowne in determining what to provide.

- Asked whether finding oxilofrine in oranges poses a public health issue, Prof. Wong answers, at the levels which he found, assuming that these are indeed the levels which he actually found, and given the uncertainties he has in the measurements, these are levels consistent with trace amounts of a contaminant

- He does not believe that the levels which were consumed in an orange or even a half dozen oranges would provide any therapeutic effects. It is his understanding that oxilofrine administered by prescription is typically prescribed in dosages in the 10's of milligrams, anywhere from 10 milligrams to roughly 50 milligrams per dose. At the levels at which the oxilofrine was present in the oranges, Mr. Lyon would have had to consume 40 to 50 micrograms of oxilofrine which is a thousand times less than what is present in a single dose. It is his professional opinion that there is absolutely no benefits and no performance enhancement and no threat to public health based on this.

- Asked to provide a scenario in which oxilofrine would end up in the oranges, like water contamination while watering the orange trees, Prof. Wong answers:

> *"If it turns out that there is a biochemical process in plants that can produce oxilofrine, is that possible? Yes! I do note that my understanding and review of the literature in these areas indicates that we only understand only a fraction of what is known about how natural products are created and behave in plants and other animals as such. The first analysis for synephrine, which is a natural product that is known to be in citrus fruits, in terms of understanding chemical creation in plants which have this, was in 1969, I believe. At that point, the technology even to analyze for something like oxilofrine did not exist. There is a lot we do not know. It is possible that it is a trace level occurring chemical that is present in citrus. In order to determine that, we must do research along those lines."*

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- The concentration found in the oranges given to Prof. Wong for his expedited analysis, there was anywhere between 2 micrograms and 9 micrograms per orange.

48. In his closing statement, the Anti-Doping Administrator repeated his request for sanctions as set forth in his written Statement.

49. Counsel for the Archer emphasized that the scenario presented by the Archer with regard to the source of the violation was consistent with the findings of Prof. Wong. He has produced very credible evidence that it was "*the contaminated oranges*" which the Archer ate during his stay in Phoenix which was the source of his positive testing of oxilofrine.

50. He pointed out that it is not the question of how the contamination got into the oranges which is deciding in this case, but rather "*the established fact*" that the contamination was proved to be present in the oranges. No one knows the source of the oxilofrine, but that, in his view, is not required under the code. All that is required is that the actual contaminated product which the Archer discovered be proved and that is the oranges in his view.

51. Even if the Panel were to disregard the testing and the appropriate instruments and the methodology, he submitted that a case has still been made that Mr. Lyon deserves a reduction in the sanction and the reduction should either be a reprimand or a complete elimination of the sanction, because all of WADA's testing and all of the commentaries to the Code, even with the revisions to the Code, no one has envisioned a contaminated fruit substance.

52. He concludes that Mr. Lyon did nothing out of the ordinary, he consumed oranges when he was sick. There are no special precautions which must be taken for that, neither as an athlete nor as an ordinary person. There is nothing more which the Archer could have done to have those oranges tested before he consumed them. Mr. Lyon would never take a substance to enhance his sporting performance.

53. Counsel for the Archer again requested an expedited decision in view of the upcoming competition with the reasons to follow later based upon a finding of no fault and no negligence.

54. Mr. Lyon then offered his final statement.

VI. THE RELEVANT ANTI-DOPING RULES

55. The World Archery Rulebook in the currently governing version of 30 March 2016

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incorporates in Book 6 the revised (2015) World Anti-Doping Code. These Rules are adopted and implemented in accordance with WA's responsibilities under the Code.

56. With regard to the instant proceedings, the following provisions of the Rules are relevant:

36.2 Anti-Doping Rule Violations

The purpose of Article 2 is to specify the circumstances and conduct which constitute anti-doping rule violations. Hearings in doping cases will proceed based on the assertion that one or more of these specific rules have been violated. Athletes or other Persons shall be responsible for knowing what constitutes an anti-doping rule violation and the substances and methods which have been included on the Prohibited List. The following constitute anti-doping rule violations:

36.2.1. Presence of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample

36.2.1.1 It is each Athlete's personal duty to ensure that no Prohibited Substance enters his or her body. Athletes are responsible for any Prohibited Substance or its Metabolites or Markers found to be present in their Samples. Accordingly, it is not necessary that intent, Fault, negligence or knowing Use on the Athlete's part be demonstrated in order to establish an anti-doping rule violation under Article 2.1

36.2.1.2. Sufficient proof of an anti-doping rule violation under Article 2.1 is established by any of the following: presence of a Prohibited Substance or its Metabolites or Markers in the Athlete's A Sample where the Athlete waives analysis of the B Sample and the B Sample is not analyzed; or, where the Athlete's B Sample is analyzed and the analysis of the Athlete's B Sample confirms the presence of the Prohibited Substance or its Metabolites or Markers found in the Athlete's A Sample; or where the Athlete's B Sample is split into two bottles and the analysis of the second bottle confirms the presence of the Prohibited Substance or its Metabolites or Markers found in the first bottle.

36.2.1.4 Excepting those substances for which a quantitative threshold is specifically identified in the Prohibited List, the presence of any quantity of a Prohibited Substance or its Metabolites or Markers in an Athlete's Sample shall constitute an anti-doping violation.

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36.3 Proof of Doping

36.3.1 Burdens and Standards of Proof

WA shall have the burden of establishing that an anti-doping rule violation has occurred. The standard of proof shall be whether WA has established anti-doping rule violation to the comfortable satisfaction of the hearing panel bearing in mind the seriousness of the allegation which is made. This standard of proof in all cases is greater than a mere balance of probability but less that a proof beyond a reasonable doubt. Where these Anti-Doping Rules place the burden of proof upon the Athlete or other Person alleged to have committed an anti-doping rule violation to rebut a presumption or establish specified facts or circumstances, the standard of proof shall be by a balance of probability.

36.3.2 Methods of Establishing Facts and Presumptions

36.3.2.1 . . . .

36.3.2.2. WADA-accredited laboratories, and other laboratories approved by WADA, are presumed to have conducted Sample analysis and custodial procedures in accordance with the International Standard for Laboratories. The Athlete or other Person may rebut this presumption by establishing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Finding. If the Athlete or other Person rebuts the preceding presumption by showing that a departure from the International Standard for Laboratories occurred which could reasonably have caused the Adverse Analytical Find, then WA shall have the burden to establish that such departure did not cause the Adverse Analytical Finding.

36.4. The Prohibited List

36.4.1. Incorporation of the Prohibited List

These Anti-Doping Rules incorporate the Prohibited List, which is published and revised by WADA as described in Article 4.1 of the Code.

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36.4.2 Prohibited Substances and Prohibited Methods Identified on the Prohibited List

36.4.2.1. Prohibited Substances and Prohibited Methods

....

36.4.2.2 Specified Substances

For purposes of the application of Article 10, all Prohibited Substances shall be Specified Substances except substances in the classes of anabolic agents and hormones and those stimulants and hormone antagonists and modulators so identified on the Prohibited List. The category of Specified Substances shall not included Prohibited Methods.

36.9 Automatic Disqualification of Individual Results

An anti-doping rule violation in Individual Sports in connection with an In-Competition test automatically leads to Disqualification of the result obtained in that Competition with all resulting Consequences, including forfeiture of any medals, points and prizes.

36.10. Sanctions on Individuals

36.10.1. Disqualification of Results in the Event during which an Anti-Doping Rule Violation Occurs.

An anti-doping rule violation occurring during or in connection with an Event may, upon the decision of the ruling body of the Event, lead to Disqualification of all of the Athlete's individual results obtained in that Event with all Consequences, including forfeiture of all medals, points and prizes, except as provided in Article 10.1.1. Factors to be included in considering whether to Disqualify other results in an Event might include, for example, the seriousness of the Athlete's anti-doping rule violation and whether the Athlete tested negative in the other Competitions.

36.10.2. Ineligibility for Presence, Use or Attempted Use, or Possession of a Prohibited Substance or Prohibited Method.

The period of Ineligibility for a violation of Articles 2.1, 2.2 or 2.6 shall be as follows, subject to potential reduction or suspension pursuant to Articles

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10.4., 10.5 or 10.6.

36.10.2.1 The period of Ineligibility shall be four years where:

36.10.2.1.1. The anti-doping rule violation does not involve a Specified Substance, unless the Athlete or other Person can establish that the anti-doping rule violation was not intentional.

36.10.2.2. The anti-doping rule violation involves a Specified Substance and WA can establish that the anti-doping rule violation was intentional.

36.10.2.2 If Article 10.2.1 does not apply, the period of Ineligibility shall be two years.

36.10.2.3 As used in Articles 10.2 and 10.3, the Term "intentional" is meant to identify those Athletes who cheat. The term therefore requires that the Athlete or other Person engaged in conduct which he or she knew constituted an anti-doping rule violation or knew that there was a significant risk that the conduct might constitute or result in an anti-doping rule violation and manifestly disregarded that risk. An anti-doping rule violation resulting from an Adverse Analytical Finding for a substance which is only prohibited In-Competition shall be rebuttably presumed to be not intentional if the substance is a Specified Substance and the Athlete can establish that the Prohibited Substance was Used Out-of-Competition. An anti-doping rule violation resulting from an Adverse Analytical Finding for a substance which is only prohibited In-Competition shall not be considered intentional if the substance is not a Specified Substance and the Athlete can establish that the Prohibited Substance was Used Out-of-Competition in a context unrelated to sport performance.

36.10.4 Elimination of the Period of Ineligibility where there is No Fault or Negligence.

If an Athlete or other Person establishes in an individual case that he or she bears No Fault or Negligence, then the otherwise applicable period of Ineligibility shall be eliminated.

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36.10.5. Reduction of the Period of Ineligibility based on No Significant Fault or Negligence

36.10.5.1 Reduction of Sanctions for Specified Substances or Contaminated Products for Violations of Article 2.1, 2.2 or 2.6.

36.10.5.1.1 Specified Substances

Where the anti-doping rule violation involves a Specified Substance, and the Athlete or other Person can establish No Significant Fault or Negligence, then the period of Ineligibility shall be, at a minimum, a reprimand and no period of Ineligibility, and at a maximum, two years of Ineligibility, depending on the Athlete's or other Person's degree of Fault

36.10.5.1.2. Contaminated Products

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.

57. The 2016 Prohibited List, International Standard, maintained by WADA, is incorporated into the WA Anti-Doping Rules referred to in Art. 36.4.1 above. Oxilofrine is listed under the Class S6 Stimulants and is a Prohibited Substance. Not being an anabolic agent or hormone, it is further designated to be a Specified Substance.

VII. JURISDICTION

58. The jurisdiction of the Panel rests on Art. 36.8.1.1. of the Rules. The Archer has expressly requested the holding of an expedited hearing which took place on 8 June 2016. In conjunction with the holding of the hearing, the Archer accepted the terms of the Order of Procedure.

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VIII. THE MERITS

The Anti-Doping Rule Violation

59. It is undisputed that the analysis performed on the Samples collected from the Archer on 9 April 2016 returned an adverse finding for the presence of oxilofrine, a prohibited substance. The Archer has also admitted the presence of oxilofrine in his body on that day.

60. Despite his general criticism of the analytical methodology applied by the Salt Lake City laboratory and his preference for the application of his "*Golden Standard*", the Archer's expert witness, Professor Wong, has not asserted that the laboratory departed from the International Standard for Laboratories and that any such identified (and articulated) departure would reasonably have caused the AAF. The Administrator, on the other hand, has not challenged or objected to the content and procedures set out in the DocPac.

61. As a result, The Panel holds that the requirements for establishing a violation of Art. 36.2.1 (Presence of a Prohibited Substance) are given. It is each archer's personal duty to ensure that no Prohibited Substance enters his or her body. Accordingly, it is not necessary that intent, fault, negligence or knowing use on the Archer's part be demonstrated. This rule has been referred to in numerous CAS decisions as "*strict liability*". It applies in the case at hand: the Archer is responsible for the anti-doping rule violation contemplated by Art. 36.2.1 of the Rules.

62. The Archer misreads the clear language of Art. 36.2.1 when he asserts in his Explanatory Statement (page 6, Pt. 5) that "*World Archery bears the onus of proving the Athlete's intent to commit the anti-doping rule violation*". WA does not bear this "onus" of proof. The presence of intent is not a prerequisite for proving commission of the violation.

63. The presence of intent, fault, negligence or knowing use becomes relevant only to the extent the athlete seeks to eliminate or reduce the consequences of the violation, namely disqualification, forfeiture and a period of ineligibility. The Archer must prove "*on a balance of probability*" (Art. 36.3.1) that he bears No Fault or Negligence (Art. 36.10.4) or No Significant Fault or Negligence (Art. 36.10.5) in having committed the violation if he intends to eliminate or otherwise mitigate the sanction.

64. In this regard, the fact that oxilofrine is a Specified Substance changes nothing in terms of its classification as a Prohibited Substance. The commentary to Art. 4.2.2. of the WADA Code (Art. 36.4.2.2 of the Rules) contained in *World Anti-Doping Code 2015* published by the World Doping Code Agency states clearly:

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> *"The Specified Substances identified in Article 4.2.2 should not in any way be considered less important or less dangerous than other doping substances. Rather, they are simply substances which are more likely to have been consumed by an Athlete for a purposes other than the enhancement of sport performance."*

65. It is also not helpful in this regard to plead that oxilofrine in the concentration detected has no enhancing effect on the competitive performance of the Archer. The purpose of the WADA Anti-Doping Code is not only to ensure fairness in competition, but to protect the athlete from risks of harm to body and health resulting from the use of Prohibited Substances.

66. In this regard, the internet is replete with websites providing the most recent scientific findings regarding the potentially harmful effects of oxilofrine on the human body. The most recent such publication, "*Warnings Issued about Oxilofrine in Supplements*", published in *Whole Foods Magazine* on 13 April 2016, cites a study released by Professor Pieter Cohen of the Harvard Medical School in March 2016.

67. Prof. Cohen's study, first published in *Drug Testing and Analysis* on-line on 7 April 2016, is obtainable at *http://onlinelibrary.wiley.com/enchanced/doi/10.1002/ dta.1976* and, in summary, states the following with regard to oxilofrine:

> *"Oxilofrine . . . is a pharmaceutical stimulant prescribed in dosages of 16 to 40 mg to stimulate the heart and increase blood pressure. It has never been approved for use in the USA as a prescription drug or as a dietary supplement. Several athletes, however, have been banned from sport for testing positive for oxilofrine and have claimed that they inadvertently consumed oxilofrine in sports supplements. Consumption of supplements containing oxilofrine may also pose serious health risks. For example, one brand of supplements containing oxilofrine has been linked to serious adverse events including vomiting, agitation, and cardiac arrest. A validated ultra-high performance liquid chromatography-guadrupole time of flight-mass spectrometry method was developed for the identification and quantification of oxilofrine. The separation was achieved using a reversed phase column. We analyzed 27 brands of supplements labeled as containing a synonym of oxilofrine ("methylsynphrine") and found that oxilofrine was present in 14 different brands (52%) at dosages ranging from 0.0003 to 75 mg per individual serving. Of the supplements containing oxilofrine, 43% (6/14) contained pharmaceutical or greater dosages of oxilofrine. Following instructions on the label, consumers could ingest as much as 250 mg of oxilofrine per day. The drug oxilofrine was found in pharmacological and greater dosages in supplements labeled as containing methylsynephrine."*

68. Based on the above, it is evident that the use of oxilofrine has caused legitimate concern not

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only with WADA, but also with numerous national health authorities.

The Consequences of the Anti-Doping Rule Violation

69. Under the Rules (as mentioned above), the sanctions for the anti-doping rule violation contemplated by Art. 36.2.1 can vary to a great extent. In fact, for a Specified Substance, such as oxilofrine, the standard sanction is a period of ineligibility for 2 years, which can be increased to 4 years, if the anti-doping administrator proves that the violation is "intentional", or completely eliminated, or reduced to a reprimand, if the archer proves "no fault or negligence" or "no significant fault or negligence".

70. In the case of the Archer, the Administrator accepted that the anti-doping rule violation committed was not "intentional"; therefore, there is no question regarding an increase of the standard period of ineligibility. The issue, indeed, is whether the period of ineligibility can be eliminated or reduced.

71. The Rules provide that there is "no fault or negligence" when the archer establishes that he or she did not know or suspect, and could not reasonably have known or suspected even with the exercise of utmost caution, that he or she had used a prohibited substance. In addition, the archer must also establish how the prohibited substance entered his or her system. On the other hand, there is "no significant fault or negligence" when the archer establishes that his or her fault or negligence, when viewed in the totality of the circumstances and taking into account the criteria for no fault or negligence, was not significant in relationship to the anti-doping rule violation. Also, in this case, the Archer must also establish how the prohibited substance entered his or her system.

72. In his pleadings for elimination or, alternatively, reduction of the sanction to, at best, a reprimand, the Archer bases his petition on two premises: (1) he has established on the basis of Prof. Wong's analysis that the source of the oxilofrine was the oranges he purchased at WalMart in Phoenix and (2) because he was completely unaware that the oranges he consumed might contain oxilofrine, it logically follows that there could be no possible intent to enhance his performance.

73. The Panel first addresses the issue of the source of the oxilofrine. After consideration of the pleadings and the testimony provided both by the Archer himself and Prof. Wong, the Panel remains unpersuaded, based on the balance of probability, that the oranges purchased at WalMart, of which he alleges to have consumed up to six in the hours leading up to the competition and the sample collection, are the source of the oxilofrine.

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74. The Panel focuses firstly on the fact that the WalMart oranges purchased in Winnipeg by the Archer for analysis in Prof. Wong's laboratory did not derive from the same lot from which he purchased the WalMart oranges in Phoenix. WalMart is one of the largest distributors of foods and consumer goods in the world. The number of its stores located in North America reach into the hundreds. It is not immediately apparent that the same brand and category of orange sold in a Phoenix store are also sold in a Winnipeg store approx. 2,000 miles away.

75. The Panel has noted that the Archer contacted the WalMart store in Phoenix to inquire about the source of the oranges and learned that these were labeled "Satsumi" oranges which he claims are grown in California. The Archer has not stated whether he asked in the Phoenix store or perhaps in WalMart's regional headquarters, if the same oranges were distributed in Canada and, in particular, to his Winnipeg store. The Archer has produced no evidence in support of this statement. There is considerable doubt on the part of the Panel whether the Satsumi oranges alleged to have been bought in Winnipeg were indeed the same oranges which he bought from WalMart in Phoenix.

76. Moreover, the Archer, who presumably was advised by counsel following the notification of the violation, apparently did not inquire with the grower and/or the fruit wholesaler of the Satsumi oranges in California to establish whether these were indeed sold in WalMart stores in the U.S. and Canada.

77. The credibility of the Archer's submission on this point would have been strengthened, if he could have at least shown evidence that he informed WalMart and the producer of the oranges, perhaps even a public health authority, of the presence of oxilofrine in the oranges (and his positive doping violation). He could have asked WalMart and/or the grower whether oxilofrine or any other chemicals are used during the growing and handling process (e.g. as fertilizers). Admittedly, the Archer would have been working on a very short timeline, but inquires could have been initiated.

78. In addition, the Panel misses proof of purchase and chain of custody from the moment he purchased the oranges in WalMart store in Winnipeg until he placed them into the hands of Prof. Wong. Without evidence of this nature, the Panel is not willing to take that "*leap of faith*" needed in order to accept, on the balance of probability, that the oxilofrine allegedly found in the oranges developed organically in them and that "*this is not a situation of contaminated product, cold medicine or nutritional product*" (page 7, Pt. 17 of the Archer's Brief).

79. In this regard, when asked by the Panel whether oxilofrine is naturally found in oranges, Prof. Wong answered clearly, "*to my knowledge, no*". He confirmed, however, that oxilofrine was found in the oranges which he tested. When then asked whether he was implying that these

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oranges were contaminated, he responded, "*I actually do not know. Is that possible? I suppose. Do I think it is likely, no.*" He stated quite clearly that "*Oxilofrine is not known to be a natural product in oranges or other citrus plants.*"

80. To be fair, Prof. Wong continued to say that "*given the fact that we only know so much about natural products and their presence in plants and other materials, this is an active area of research worldwide.*" But he then established once again in the same sentence, "*that we simply do not know whether oxilofrine is present as a natural product. Mother nature is very good at making things.*"

81. Waffling statements such as the above are not sufficient to convince the Panel that, on a balance of probability, oxilofrine could be a natural substance in oranges. All three expert witnesses, Dr. Saugy, Dr. Mazzoni and Prof. Wong ruled out the possibility of a "*false positive*", for example, if synephrine were to have been wrongly identified as oxilofrine. State of the art testing equipment is too sensitive in their view.

82. What surprised the Panel was Prof. Wong's reluctance (or inability) to even begin to postulate that environmental situations, such as water pollution, may be the source of the contamination ("*To my knowledge, there is no literature on the presence of oxilofrine in environmental matrices.*"). The Panel accepted his opinion that "*if you don't look for it, you won't find it*". Prof. Wong said little which would lend weight to his statement that "*Mother nature is very good at making things.*"

83. Although his professional focus (Professor and Canada Research Chair in Ecotoxicology) would indicate to the Panel that, if an environmental explanation exists, is in the making, or is even speculated upon in current environmental research, it would be someone of the caliber of Prof. Wong who could provide information in this area. Prof. Wong's silence on this point worked more to further reduce credibility in the allegation that oxilofrine developed organically in the orange.

84. Paradoxically, Prof. Wong's conclusion that oxilofrine is not known to be a natural product was further supported, if not confirmed, by the testimonies of Dr. Saugy and Dr. Mazzoni. Both submitted that, on the basis of their knowledge, oxilofrine is a synthetic substance, a compound of synephrine and a chemical from the methyl group, also called methylsynefrine.

85. While Prof. Wong's testing methodology (his "Golden Standard") may indeed provide more accurate results in the quantification of the oxilofrine found in the Archer's urine, the Archer overlooks that it is not the quantity of the oxilofrine detected which is deciding in this case, but rather the fact that oxilofrine was present in the urine at all. Oxilofrine is not a threshold substance. Any amount found in the sample constitutes an anti-doping violation and results in

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an AAF. But even Prof. Wong conceded that his analysis focused on the qualitative, rather than the quantitative aspects of the identified oxilofrine.

86. The Panel also found it troublesome that Prof. Wong's findings were confined to a two-sentence "memo", later submitted by Dr. Crowne as the expert's witness statement, the content of which is re-stated in marg. note 25. above. The fact that Prof. Wong did not generate a DocPac similar to that generated by the Utah laboratory (although he received the Utah DocPac from Dr. Crowne) and that Dr. Crowne did not request even the "raw data" produced by Dr. Wong does little to strengthen the credibility of Dr. Wong's findings.

87. Based on the above, the missing proof of purchase and chain of custody, the preponderance of scientific opinion that oxilofrine is not a natural substance which develops organically in oranges and the misdirected and unsubstantiated testimony of Prof. Wong with regard to his laboratory methodology, the Panel is forced to conclude that the Archer has not met his burden of proof regarding the source of the oxilofrine.

88. This conclusion is also reinforced by the testimony of the Archer himself. He did not subsist over the 6 day duration of the Arizona event exclusively on oranges, salads, water and caffeine tablets, not to forget the taking of his medication called amoxicillin. He admitted that he made "*two or three trips*" to WalMart in order to buy foodstuffs – salads and fruits "*and other things*". He also ate Quest bars, purchased roaster chickens, cole slaw, fruit salads, etc. when congregating with teammates and their friends. There is a question whether the Archer has really undertaken a rigorous inventory of his WalMart food and beverage purchases, his evening mealtimes, with or without friends, and any other snacks and energy boosters consumed during his stay in Phoenix.

89. While the Archer's attention may "logically" focus on the Satsumi oranges which he ate as the source of the oxilofrine contamination, the Panel takes note that the Archer was apparently no stranger to nutritional supplement stores. He apparently needed a "boost" to his circulation when getting up in the morning and, for this reason, ingested on a daily basis his caffeine tablets purchased from such a store in his home town. The Archer also admitted to have consumed "*protein powders*" in the past.

90. As noted above, Prof. Cohen's study alleges that in over 14 different brands -- 52% of the total 27 brands of nutritional supplements which his laboratory tested --, the dosages ranged from 0.0003 to 75 mg per individual serving. This study and others report that nutritional supplements containing oxilofrine are used to increase blood pressure, pulse rate, circulation and concentration, all of these being the factors needed when arising in the morning. As the study concludes, the consumption of supplements containing oxilofrine can pose serious health risks. This is one of the reasons why the substance is placed on the Prohibited List.

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91. The Panel finds no grounds to assume that the Archer in consuming oxilofrine acted intentionally in order to enhance his performance. This view is also shared by the Administrator; a four year ban was not requested.

92. Dr. Saugy testified that peak times after intake of oxilofrine range between two and five hours. Concentrations during peak time would be "*several milligrams per milliliter*". The 200 ng concentration found in the Archer's urine does not therefore indicate a massive dosage of oxilofrine, although the Panel notes that both Dr. Saugy and Prof. Wong concurred that the absorption and pharmakinetic effect of any dosage of oxilofrine is difficult, if not impossible, to estimate due to differing metabolic and excretion processes in the individual body.

93. Dr. Saugy's opinion is further supported by his statement that full elimination of oxilofrine would generally take 28 to 72 hours, and that a massive ingestion of the substance of 700+ mg could result in a concentration of several micrograms, if the urine sample were taken on the same day. This reinforces the conclusion that that the 200 mg found in the Archer's sample indicates a smaller, rather than larger, intentionally consumed, doses.

94. As a consequence, it does not appear to the Panel, on the basis of the 200 nanograms measured, that the Archer's ingestion of oxilofrine exceeded the 16 or 31 mg of oxilofrine contained in a medically used tablet, a nutritional supplement or in oranges or other fruit.

95. In conclusion, the Panel wishes to emphasize that it has no cause to assume that the Archer is a "*cheater*". His excellent performance record and lack of any previous violations of the Rules over many years of competition speak for themselves.

96. Unfortunately, however, and the Panel is quite sincere on this point, the Rules laid down in Art. 36.10.5. provide no latitude for further mitigation of the period of ineligibility below two years. The fact that the Archer has not succeeded in establishing the source of oxilofrine, as set out above, closes the door to any further assessment of whether the two year period of ineligibility may be eliminated entirely on the grounds of "No Fault or Negligence" (Art. 36.10.4) or be further reduced to just a reprimand on the grounds of "No Significant Fault or Negligence" (Art. 36.10.5).

97. The Panel also notes that, if the Archer had chosen not to opt for an expedited hearing in order to preserve his possibility to compete in pre-Olympic qualifications, and had given himself more time to thoroughly prepare his case, the outcome of the hearing might have been different. His right to appeal this decision to the CAS will provide him the opportunity to "re-trench" and better present his defense in a *de novo* hearing and new adjudication of the evidence.

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IX. SANCTIONS

98. In the absence of grounds for which the period of ineligibility may be eliminated or reduced pursuant to Art. 36.10.4 and, respectively, Art. 36.10.5 of the Rules, the Panel applies Art. 36.2.1.2 in conjunction with Art. 36.10.2.2. The Panel finds no grounds to assume that the violation which involved the use of a Specified Substance was intentional. Because Art. 36.10.2.1.2 does not apply, the period of ineligibility shall be two years.

99. Pursuant to Art. 36.10.1 of the Rules, and because the anti-doping rule violation occurred during the Arizona Cup Event, the Panel has decided to disqualify the Archer of all of his individual results obtained at the Arizona Cup Event with all Consequences, including forfeiture of all medals, points and prizes.

100. In addition, any competitive results obtained by the Archer from the date of his positive sample on 9 April 2016 until the date of his provisional suspension are hereby retroactively forfeited and disqualified in accordance with Art. 36.10.8 of the Rules.

X. COSTS

101. This decision is pronounced without costs to the Archer. He shall assume, however, whatever costs have been incurred in conjunction with his defense, in addition to the costs which he has incurred from attending the hearing on 8 May 2016 from Mississauga and Winnipeg and any of the costs incurred by his expert witness.

102. Any costs of WA to be assumed by Archery Canada shall be calculated and communicated separately by the Secretary General of World Archery.

XI. ARCHER'S RIGHT TO APPEAL TO CAS

103. The decision of the Panel made under these Rules may be appealed exclusively to the Court of Arbitration for Sport (CAS) in Lausanne in accordance the Art. 36.13.2 et seq. of the Rules and in accordance with the provisions applicable before the CAS.

104. The time to file an appeal to CAS is twenty-one (21) days from the date of receipt of this reasoned decision by the appealing party).

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XII. THE DECISION OF THE PANEL

1. Jason Lyon has committed an anti-doping rule violation pursuant to Article 36.2.1 of the Anti-Doping Rules of the World Archery Federation.

2. Jason Lyon is sanctioned with a period of ineligibility of two (2) years pursuant to Article 36.10.2 of the Anti-Doping Rules of the World Archery Federation, commencing as of the date of the provisional suspension on 19 May 2016.

3. All competitive results achieved in individual competition by Jason Lyon at the Arizona Cup between 7 April 2016 and 10 April 2016, in particular, all medals, points and prizes obtained by him, are forfeited and disqualified. Likewise, any competitive results obtained by him from the date of his positive sample on 9 April 2016 until the date of his provisional suspension are hereby retroactively forfeited and disqualified.

4. This decision is pronounced without costs to Jason Lyon, other than the costs which he has incurred personally in connection with preparing his defense and attending the hearing by video/audio conference from Mississauga, Ontario on 8 June 2016. Any costs of the World Archery Federation to be assumed by Archery Canada shall be calculated and communicated separately by the Secretary General.

5. This decision may be appealed exclusively to the Court of Arbitration for Sport within twenty-one (21) days from the date of receipt of the full written decision of the Anti-Doping Panel containing an explanation of the reasons for the above sanctions.

Lausanne, 5 July 2016

John A. Faylor
President
Anti-Doping Panel
World Archery