

Reprint from

**10th Cologne Workshop On Dope Analysis
7th to 12th June 1992
- Proceedings -**

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Sport und Buch Strauß, Köln, 1993

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In: M. Donike, H. Geyer, A. Gotzmann, U. Mareck-Engelke, S. Rauth (eds.) 10th Cologne
Workshop On Dope Analysis 7th to 12th June 1992. Sport und Buch Strauß, Köln, (1993) 389-395

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Case Studies from Switzerland - Proposition for Standardization of Doping Control Materials

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1. Introduction

In order to understand the Swiss situation in the fight against doping one has to know the structure of sports. In Switzerland, the organization of sport is embodied in the "Swiss Sports Concept". This concept is in harmony with the diversified cultural and political structure of Switzerland and it is mentioned in the Swiss constitution and its implementary provisions. There are, in analogy to the cross in our flag, four main bodies with its duties and competences (figure 1: the structure of the Swiss Sports Concept).

In the sphere of private law the Swiss Sports Federation (SSF) and the different sports federations with their clubs are mainly responsible for mass sports, optional sports and top-level sports. The SSF as umbrella organization of the sports federations began the fight against doping in the early sixties and provided one of the first nationwide doping regulation in 1967. The newest regulation dates from November 1989.

In the sphere of public law the Federal Government, the cantons and municipalities are responsible for sports as an integral part of education (finances, organization, infrastructure, teaching aids, teacher's training). It supports additionally certain activities of the SSF, the sports federation and their clubs. Until recently the organizations of the public law were only marginally involved with the problems of doping in sport. The discussion about doping in mass sports and doping with juveniles showed a general health aspect which falls in the responsibility of public law.

The Convention against doping of the Council of Europe, that was signed (but not yet ratified) by Switzerland, gives even more arguments for common responsibilities between the private SSF and the government in the fight against doping.

2. The doping regulation of the SSF

This regulation was adopted unanimously by the sports delegates on November 16, 1989. Since April 1, 1990 it is in full operation. Some of the main points are:

- All sport federations that are member of the SSF have to follow these regulations.
- The doping list of the IOC is adopted.
- An interdisciplinary anti-doping-commission is handling questions about doping (before this was part of the medical commission of the SSF). This commission is mainly dealing with operational, juridical and medical problems related to doping.
- Out of competition tests for top level athletes were introduced. The several sports federations are mainly responsible for tests at competitions. For this they have to send the dates of the competitions for one year to the SSF. The SSF determines the quotas (how many tests at how many competitions) for each federation. Additionally the SSF draws by lot some competitions that are visited unannounced by special control officers. The federations are not informed in advance about these controls. In Switzerland we call these controls "system-controls", which means it is a kind of quality control. In 1991 most of the positive cases derived from such "system-controls".

The out of competition tests are drawn by lot by the SSF. The designed athletes are then asked to go to the nearest of the nine special places (e.g. hospitals or medicolegal institutes) in Switzerland to deliver the urine. The sports federations are not involved in the out of competition tests.

In the year 1991, 1326 tests at competitions were performed by 58 federations. The SSF performed 164 tests at competitions ("system-controls") and 198 tests out of competition.

- In very special cases top level athletes may be treated with doping substances. This is only allowed if there is no other possibility. During the treatment, the athlete should not be able to compete or to train. The medical doctor in charge has to apply by letter in advance to the designed medical doctor of the anti-doping-commission for such a treatment. This treatment and the circumstances have to be fully explained. The doctors of the anti-doping-commission decide if it is really a case to use doping substances (so called "therapy-window"). As far as I know until today there was no such case.
- The federations are in charge of the penal provisions and sanctions against their athletes. The SSF and its anti-doping-commission supervise the procedures and help in case of uncertainties.

For the first of the following cases it is important to know the Swiss control concept and the idea of the very restrictively handled "therapy-window".

3. Case studies

The first two positive cases I would like to explain can really be treated as one. Last winter, during the regular Swiss ice-hockey championship, two "system-controls" were drawn by lot by the SSF. The first was on November 1, 1991, the second on November 5, 1991. Two games with different teams were tested. In the laboratory of Prof. Donike the urine samples of two players from different teams were tested positive with nandrolone.

Because the championship was in full course, the Swiss ice-hockey federation suspended the two players immediately and made a press release with the facts and the names of the players. It was also mentioned that both players had the same medical doctor. He claimed that he treated both in April / May 1991, after the regular ice-hockey season. One player was treated for a knee injury and one for asthmatic allergy. Each player received among other medications a single injection of nandrolone. The medical doctor claimed that he acted according to the medical indications given for treatments with nandrolone, that he gave only one single injection each, and that he did not mention this to the athletes. In a television transmission he could defend his treatment and that this was according to the "therapy-window" of the SSF. The whole story was covered widely by the mass media and every party (the federation, the players and the doctor) took a lawyer.

In my opinion these two cases showed several open questions and major uncertainties:

- The doctor interpreted the term "therapy-window" wrong. This kind of treatment (even if he would have announced it correctly in advance to the anti-doping-commission of the SSF) would certainly not qualify as a "therapy-window".
- The mass media were informed too early with the full names of the athletes before they could decide about a B analysis. Maybe this happened because the legal situation was not entirely clear. Which regulations, the one of the international, the one of the national federation or the one of the SSF, should be followed? After these cases the national ice-hockey federation is now adapting its doping regulations to exclude such uncertainties in the future.
- It is hard to believe that the application of a single dose of nandrolone in April / May should still be detectable in November. If this were the case, should the players be suspended until no nandrolone could be detected any longer? When they are allowed to play and found again positive in a new control, could they be suspended again? Can the players claim damages (they were suspended for six games) from the doctor because he treated them with a banned substance and did not inform them?

The other positive case I would like to mention concerns a Swiss cyclist who was tested positive in a competition in Germany. His ratio of testosterone to epitestosterone (T/ET) was found to be around 15. The B analysis confirmed this.

Because this was the second offence (the first concerned amphetamine) the national federation suspended him for six months. After three months the athlete appealed to a civil court claiming an offence against his personality. In the injunction the federation was told to give back the license. The court only judged and confirmed a possible offence against the personality of the athlete and did not comment on the proofs or the questions about the claimed mistakes in the course of the doping control. This would have been the task of an ordinary court procedure. But this was not instituted.

Again the mass media were widely involved. Beside questioning the T/ET ratio the whole course of doping control and the safety of the used material were discussed.

Since the end of 1990 we have been looking into the issue of the chain of custody from sample taking to the laboratory. This includes the harmonization of doping control material and protocols as well as the training of doping control officers. These officers are volunteers. That's why the control material and the procedures should be self-explaining, easy to use and foolproof. With cooperation of Prof. Donike and the 3M Company Switzerland we developed an evidence tape to seal the doping samples.

4. Harmonization of doping control material

In Switzerland athletes often expressed the fear, that their names are known by the laboratory. That is why we created a protocol for doping controls where on the copy for the laboratory all the relevant data concerning the identity of the athlete are cut out. Instead of lines for the names, signatures and even the number of the B sample there are "holes" in the paper.

In Switzerland we have been using a sealing system (some kind of "evidence tape") for urine bottles since fall 1990.

Because of the easy and safe handling there were no substantial problems with our non-professional doping control officers.

The system bases on the patented multilayer synthetic tape of the 3M Company. The material is also used as distinguishing label for removable parts in car industry and it is produced with very tight quality tolerances.

Once the tape is put on the bottle it leaves a writing behind which is then missing on the seal. Like this it can be ensured that the seal cannot be removed and put on again.

Additionally the letters A and B are shown with a scattered print. We use the colors yellow for A and blue for B (of course the colors may be used reversed as i.e. for the Olympic Games).

The sample numbers are printed on the seal.

In order to identify the empty bottles they are marked with a label (made of the same safety tape) and the logo of the supervising federation (with us: SLS/ASS). Like this the bottles cannot be exchanged with forgeries before the urine deposition.

An athlete is also allowed to choose numbers of A and B freely. Therefore the analyzing laboratory cannot make out, which B and A samples belong together.

It is possible to print a logo of the federation on the stripe in the middle of the seal. The logo and the already issued numbers of the seals can be registered with the company that is preparing the sets. So nobody else could order exactly the same seals that have been ordered by another federation.

A last detail: Two temperature indicators are mounted on the seal. These indicators serve to detect exposure of the samples to high temperatures what could change the urine or to detect heating of the sample in order to detach the seal.

The only problem we had with the seals were the poor adhesion on wet glass bottles. That is why we were looking for a more suitable material for urine bottles. We evaluated a bottle of polyethylene terephthalate (PET) and a screw cap of polyethylene with a teflon joint and a marker ring that will stick to the bottle after opening. None of the material contains plasticizer that could migrate into the urine sample. The material is widely used in the pharmaceutical industry. The price of the PET bottle with screw cap is about the same as the one of the glass bottles and aluminium crimp-cap.

The advantages of the PET bottle combined with the adhesive seal are the following:

- The system is very easy to handle and of low expenditure.
- No additional tools like wax or tongs are necessary.
- There is no engraving of the bottles anymore.
- It is one-way/non-returnable material and needs no extra package such that voluminous, time consuming and expensive return transports fall away.
- Unbreakable, small and light (mailing costs!) material that is harmless to dispose or could even be recycled.
- The actual price of a set (two bottles, two caps, one urine beaker, two seals) is about SFr. 15.- (that is about 5% of the cost of the analysis of one sample).
- All the parts of the set are manufactured by different companies. The sets could be assembled by one company (e.g. Berlinger & Co, Ganterschwil, Switzerland). This company could keep record of already ordered seals and numbers so giving the necessary security.

- Versatility: the appearance of the seal (colors, logos) can be adapted to individual needs. Even the colors of the screw cap may be chosen (e.g. according to the seals yellow and blue for the samples A and B, if necessary red for the intermediate sealing when an athlete could not produce enough urine). This option depends on the number of ordered sets.
- High security with the optimal combination of the seal and the material of the bottle. The marker ring that has to be broken when the bottle is opened, gives an additional security.

I can see only three possible disadvantages:

- A federation cannot use any longer the bottles from the own country but has to order the whole set in Switzerland. From the aspect of harmonization this would be very welcome but I think it is not yet possible.
- The material PET could eventually be penetrated by a strong needle to alter the sample. The hole could be closed with a special glue that could not be detected by a superficial control in the laboratory.
- Although the price of the set is around 5% of the analyzing costs it is regarded as too high.

That is why we are looking for another doping sealing system. With an idea of Prof. Donike we are developing a versatile, easy to use, forgery proof and moderate priced plastic bag for any kind of bottles used in doping control. In due course I can provide more informations.

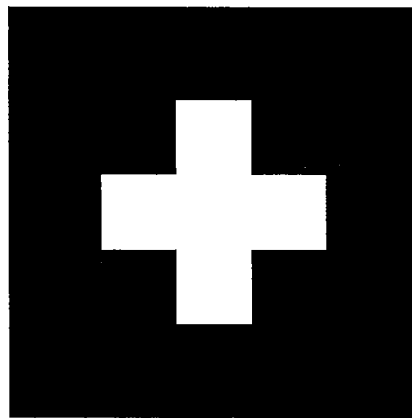
Personally I think that we have to harmonize and standardize our whole sample taking procedures. For the IOC accredited laboratories we have a chain of custody and a quality control. What we really need is a firmer chain of custody also for the whole procedures of sample taking. Why not try to accredit the suitable materials, protocols and procedures?

Swiss Sports Organization

SSF

SPORTS
FEDERATIONS

PRIVATE LAW



PUBLIC LAW

FEDERAL
GOVERNMENT

CANTONS
MUNICIPALITIES