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## **Stanozolol - new aspects of metabolism, sample preparation and analytical methodology**

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### **Abstract**

The anabolic steroid stanozolol is one of the most frequently misused drugs in sports. It has been intensively focused by doping laboratories over the past resulting in many different analytical assays based on LC- or GC-MS(/MS). Nevertheless, ongoing improvement of analytical methodology stays essential for effective sports drug testing. We here report on the investigation of stanozolol post-administration samples using LC-OrbiTrap MS. Urinary excretion profiles of different glucuronidated stanozolol metabolites were investigated and potential new target analytes were implemented into a very easy, specific and sensitive assay based on direct injection of urine. The method enabled the detection of stanozolol up to 28 days after a single administration of 5 mg stanozolol. Ten times lower detection limits were estimated compared to commonly applied screening methods.

Published as:

Schänzer W, Guddat S, Thomas A, Opfermann G, Geyer H and Thevis M. (2013), Expanding analytical possibilities concerning the detection of stanozolol misuse by means of high resolution/high accuracy mass spectrometric detection of stanozolol glucuronides in human sports drug testing. *Drug Test Analysis*, **5**: 810–818. doi: 10.1002/dta.1516