

## PROJECT REVIEW

### ***“Addition of 19-Norandrosterone in a new certified reference material for human urinary steroids”***

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Detection of the use of the anabolic steroid nandrolone is based primarily upon the identification of the main urinary metabolite, 19-norandrosterone. Laboratories use the sophisticated technique of gas chromatography mass spectrometry to detect 19-norandrosterone in athletes' urine. WADA have recently taken steps to harmonize the analysis of nandrolone, issuing WADA Technical Document TD2016NA in 2016.

Reference materials are a vital tool for validating analytical testing methods and for ongoing laboratory quality assurance. International best practice specifies that CRMs be used as part of routine laboratory quality control. However CRMs for the measurement of steroid metabolites in human urine are not readily available. The project involves certification of the stable carbon isotope delta value of 19-norandrosterone (19-NA) in CRM MX017, currently being prepared for WADA project 15J04JM. Laboratories will reconstitute this material with water, and then analyse it alongside samples of urine taken from athletes for doping control. The testing laboratory can then compare the measured values for the CRM to those certified, providing assurance of the validity of the testing procedure.