

PROJECT REVIEW

“Certification of Steroid Carbon Isotope Ratios in a Freeze Dried Urine Certified Reference Material.”

L. Mackay, J. Murby (National Measurement Institute, Pymble, Australia),
R. Kazlauskas (Australian Sports Drug Testing Laboratory, Pymble, Australia)

A key component in identifying the illegal use of the natural hormone testosterone for performance enhancement is the ability of WADA-accredited laboratories to accurately determine the very small changes that occur in carbon isotope ratios after doping. This project aims to enhance a previously prepared Certified Reference Material (CRM) of testosterone in urine by providing a very well characterised reference value for the carbon isotope ratios of steroids related to testosterone abuse in the CRM. The availability of a CRM with well-defined carbon isotope ratios traceable to international standards with low uncertainty will permit laboratories to unequivocally demonstrate the reliability of their methods and ensure comparability of results from different laboratories. This material will be the first certified reference material of this type available in a urine matrix.

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Results and Conclusions

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