

androstanediol (5 $\beta$ A), and the endogenous reference 5 $\beta$ -pregnanediol (5 $\beta$ P) in the frame of an excretion study following oral ingestion of testosterone initially and 13 h later by a healthy, male Caucasian volunteer ...

“Similarly to the T/E ratio, the  $\delta^{13}\text{C}$ -values of the four T metabolites decrease rapidly after T administration with a difference of about 5‰ with respect to the endogenous reference 5 $\beta$ P ...

“our results suggest that measurements of 5 $\beta$ -androstanediol  $\delta$ -values allow the detection of a testosterone ingestion over a longer period than other T metabolites  $\delta^{13}\text{C}$ -values.”

Therefore, if an athlete used exogenous testosterone, his measured difference 5 $\beta$ Adiol - 5 $\beta$ Pdiol should be greater than his measured difference 5 $\alpha$ Adiol - 5 $\beta$ Pdiol. In the Landis sample, this is not even close to the case: LNDD reported the following corrected values:

For the “A” sample:

5 $\beta$ Adiol - 5 $\beta$ Pdiol: -2.15‰

5 $\alpha$ Adiol - 5 $\beta$ Pdiol: -6.14‰

For the “B” sample:

5 $\beta$ Adiol - 5 $\beta$ Pdiol: -2.65‰

5 $\alpha$ Adiol - 5 $\beta$ Pdiol: -6.39‰

Had Landis used exogenous testosterone, the Maitre publication indicates that his 5 $\beta$ Adiol - 5 $\beta$ Pdiol should be at or greater than -6‰, given the measurement of 5 $\alpha$ Adiol - 5 $\beta$ Pdiol. At a minimum, one would expect the 5 $\beta$ Adiol - 5 $\beta$ Pdiol to exceed the threshold of 3‰, which it does not. The only conclusion that can be drawn from the fact that the 5 $\beta$ Adiol - 5 $\beta$ Pdiol measurement is well below the threshold, when the WADA-accredited laboratories state that this measurement is the **best indicator** of exogenous testosterone administration, is that Floyd Landis did not use exogenous testosterone.