

Prohibited substance analysis of herbal based supplements intended for use by the athlete

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The screening of herbal based nutritional supplements for substances prohibited by WADA (World Anti Doping Agency) using techniques such as GC-MS/MS and LC-MS/MS has proven challenging not only due to the sensitivity required but also the complexity and variety of matrices requiring testing. Such assays are required to ensure products released to athletes are free of doping agents and provide manufacturers with a means of eliminating trace contamination from their production processes. Some of the most common findings in nutritional supplements tested so far include testosterone and/or its precursors. The presence of these compounds in animal based ingredients is widely accepted and an athlete may readily ingest minute levels of these compounds on a daily basis. However, little is known about the presence of these compounds in plant based materials. Work performed by HFL Sport Science has indicated low levels of testosterone and its precursors to be present in some herbal materials. These findings have led to changes in the way results are reported for these compounds.