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DISTRIBUTION OF CAFFEINE LEVELS IN URINE IN DIFFERENT SPORTS IN INDIA

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Caffeine (1,3,7-trimethylxanthine) is a xanthine alkaloid compound that acts as a stimulant and was banned for use in sports. Caffeine was removed from the World Anti-Doping Agency (WADA) prohibited list from January 2004. As per the requirement of WADA, the WADA-accredited labs are monitoring the presence of caffeine for signs of possible abuse. National Dope Testing Laboratory (NDTL), India, is monitoring caffeine levels in in-competition urine samples of sports persons from different sports disciplines. The aim of the present study is to find the distribution of caffeine levels in urine in different sport disciplines in Indian and other south-east Asian countries. Caffeine was measured using an alkaline extraction with tertiary butyl methyl ether followed by gas chromatographic nitrogen-phosphorus specific detection. A comparison of statistical data from the urine samples done from January 2008 to July 2010 in NDTL, India, for different discipline of sports since January 2008 to July 2010 was performed. The study proves beneficial in monitoring the abuse of caffeine in different disciplines of sports.