

History of mass spectrometry at the Olympic Games

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Mass spectrometry has played a decisive role in doping analysis and doping control in human sport for almost 40 years. The standard of qualitative and quantitative determinations in body fluids has always attracted maximum attention from scientists. With its unique sensitivity and selectivity properties, mass spectrometry provides state-of-the-art technology in analytical chemistry. Both anti-doping organizations and the athletes concerned expect the utmost endeavours to prevent false-positive and false-negative results of the analytical evidence.

The Olympic Games play an important role in international sport today and are milestones for technical development in doping analysis. This review of the part played by mass spectrometry in doping control from Munich 1972 to Vancouver 2010 Olympics gives an overview of how doping analysis has developed and where we are today.

In recognizing the achievements made towards effective doping control, it is of the utmost importance to applaud the joint endeavours of the World Anti-Doping Agency, the International Olympic Committee, the international federations and national anti-doping agencies to combat doping. Advances against the misuse of prohibited substances and methods, which are performance-enhancing, dangerous to health and violate the spirit of sport, can be achieved only if all the stakeholders work together.