Drug Status Report

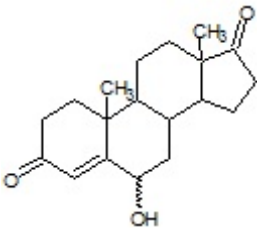
Drug: 6-Hydroxyandrostenedione

Drug Name Status: 6-Hydroxyandrostenedione is the common name.

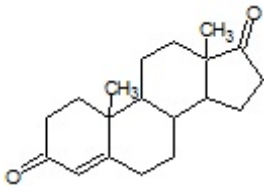
Other Names: 4-Androsten-6-ol-3,17-dione

Chemical Name: 6-Hydroxy-androst-4-ene-3,17-dione

Chemical structure:



This substance exists as two isomers - 6alpha- and 6beta-



Androstenedione

Molecular Formula: $C_{19}H_{26}O_3$

Pharmacological class / Application: steroid

International status:

US: The substance is not currently listed on the schedules to the US Controlled Substances Act and is not mentioned on the DEA website.

United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Androstenedione (4-androsten-3,17-dione, structure above) although not specifically listed on Schedule IV to the CDSA as an anabolic steroid has been considered to be an anabolic steroid since 2001.

The 6alpha- isomer is a metabolite of androstenedione and considered a marker for

androstenedione administration[1]. Hydroxylation of steroids to give the 6-beta-hydroxy isomers is a recognized metabolic pathway[2]; the 6-beta-hydroxy metabolite of androstenedione has been reported[3].

As 6alpha- and 6beta-hydroxyandrostenedione are metabolites (derivatives) of an anabolic steroid (androstenedione) they are included in item 23 of Schedule IV, "Anabolic steroids and their derivatives".

Recommendation: 6alpha- and 6beta-Hydroxyandrostenedione are included in item 23 of Schedule IV and are controlled substances.

September 29, 2008

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[1] Catlin DH, Leder BZ, Ahrens BD, Hatton CK, Finkelstein JS. Steroids. 2002 Jun;67(7):559-64.

[2] Rendic S, Nolteernsting E, Schänzer W. J Chromatogr B Biomed Sci Appl. 1999 Nov 26;735(1):73-83. and
Kammerer RC, Merdink JL, Jagels M, Catlin DH, Hui KK. J Steroid Biochem. 1990 Aug 28;36(6):659-66.

[3] Koleva M, Stoytchev T, Gulyaeva L, Grishanova A, Mishin V, Lyakhovich V. Eur J Drug Metab Pharmacokinet. 1991 Apr-Jun;16(2):103-6.