

Drug Status Report

Drug: 4-Androstene-3,17-diols

Drug Name Status: 4-Androstene-3,17-diol is the common name. There are four isomers possible.

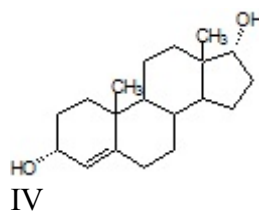
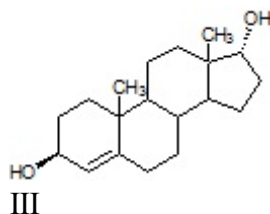
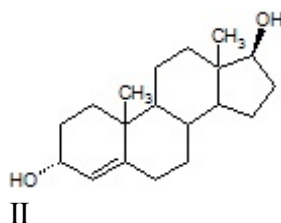
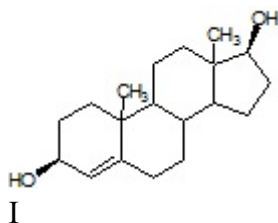
Chemical Name: (3-beta,17-beta)-Androst-4-ene-3,17-diol (I)

(3-alpha,17-beta)-Androst-4-ene-3,17-diol (II)

(3-beta,17-alpha)-Androst-4-ene-3,17-diol (III)

(3-alpha,17-alpha)-Androst-4-ene-3,17-diol (IV)

Chemical structure:



Molecular Formula: C₁₉H₃₀O₂

Pharmacological class / Application: steroid

International status:

US: Substance I is listed on Schedule III to the US Controlled Substances Act. Substances II to IV are not listed on the schedules to the CSA and are not mentioned on the DEA website.

United Nations: Substances I to IV are 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: Substance I was the subject of a status report in 2001. It is considered to be a controlled substance and is included in the OCS listed of controlled substances under the name 4-Androstene-3β,17β-diol.

Substance II is a derivative (metabolite) of testosterone.^{1,2,3}

No references could be found indicating that substances III and IV are derivatives of anabolic steroids or that they have anabolic activity.

Recommendation: Substance II, (3- α ,17- β)-androst-4-ene-3,17-diol, is included in item 23 of Schedule IV and is a controlled substance.

Substances III, (3- β ,17- α)-androst-4-ene-3,17-diol, and IV, (3- α ,17- α)-androst-4-ene-3,17-diol are not included in item 23 of Schedule IV and are not controlled substances.

January 4, 2009

¹ Darby NJ, Spencer S, Lodola A, Burnet FR. *J Endocrinol.* 1985 Nov;107(2):205-9.

² Kaburagi Y, Fukabori Y, Takahashi E, Yamanaka K, Honma S, Yamaguchi T, Mori H, Kanbegawa A. *Nippon Naibunpi Gakkai Zasshi.* 1984 Nov 20;60(11):1314-27.

³ Stenstad P, Lofthus R, Eik-Nes KB. *J Steroid Biochem.* 1983 Dec;19(6):1775-8.