STATUS DECISION OF CONTROLLED AND NON-CONTROLLED SUBSTANCE(S)

Substances: 5beta-androstan-17alpha-methyl-17beta-ol-3-one and 5beta-androstan-17beta-ol-3-one

Based on the current information available to the Office of Controlled Substances, it appears that the above substances are:

Controlled  X
Not Controlled  □

under the schedules of the Controlled Drugs and Substances Act (CDSA) for the following reason(s):

- The drug is currently not listed specifically on the CDSA.
- Methyltestosterone is listed as subitem 23 (25) of Schedule IV to the CDSA. Gabbard and Segaloff\(^1\) reported the direct conversion of 17-methyltestosterone to 5beta-androstan-17alpha-methyl-17beta-ol-3-one (I) by alkaline catalytic hydrogenation. They also reported the direct conversion of testosterone subitem 23(40) of Schedule IV to 5beta-androstan-17beta-ol-3-one (II).
- Substance II is the 5 isomer of 17β-hydroxy-5α-androstan-3-one or stanolone which is listed on the list of controlled substances.
- As derivatives of two anabolic steroids, 5beta-androstan-17alpha-methyl-17beta-ol-3-one (I) and 5beta-androstan-17beta-ol-3-one (II) are included in item 23 of Schedule IV to the CDSA.

Supporting document(s) attached: X

Prepared by: ________________________________ Date: 2005-08-11
TIANA BRANCH

Verified by: See email ________________________________ Date: 2005-08-10
MICHAEL LEBELLE

Approved by: ________________________________ Date: __________
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

Drug Status Report

**Drug:** 5beta-Androstan-17alpha-methyl-17beta-ol-3-one (I)
5beta-Androstan-17beta-ol-3-one (II)

The status request for this report specified only 5beta-androstan-17alpha-methyl-17beta-ol-3-one (I). In the course of reviewing information on this substance incidental information on (II) was found indicating it should have the same status of (I).

**Drug Name Status:** 5beta-Androstan-17alpha-methyl-17beta-ol-3-one and 5beta-Androstan-17beta-ol-3-one are chemical names.

**Chemical Name:** I: (5β,17β)-17-hydroxy-17-methylandrostan-3-one
II: (5β,17β)-17-hydroxyandrostan-3-one

**Other Names:** I: Dihydromethyltestosterone
II: Dihydrotestosterone; 5β-stanolone

**Chemical structure:**

![Chemical structure of (I) and (II)](image)

**Molecular Formula:** I: C_{20}H_{32}O_{2}; II: C_{19}H_{30}O_{2}

**Pharmacological class / Application:** steroid

**International status:**

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

United Nations: The drug is not listed on the Yellow List - List of Narcotic Drugs under International Control. The drug is not listed on the Green List - List of Psychotropic Substances under International Control

Canadian Status: The drug is currently not listed specifically on the CDSA.
Methyltestosterone is listed as subitem 23 (25) of Schedule IV to the CDSA. Gabbard and Segaloff\textsuperscript{2} reported the direct conversion of 17-methyltestosterone to 5beta-androstan-17alpha-methyl-17beta-ol-3-one (I) by alkaline catalytic hydrogenation. They also reported the direct conversion of testosterone subitem 23(40) of Schedule IV to 5beta-androstan-17beta-ol-3-one (II). Substance II is the 5 isomer of 17β-hydroxy-5α-androstan-3-one or stanolone which is listed on the list of controlled substances. As derivatives of two anabolic steroids, 5beta-androstan-17alpha-methyl-17beta-ol-3-one (I) and 5beta-androstan-17beta-ol-3-one (II) are included in item 23 of Schedule IV to the CDSA.

Recommendation: 5beta-Androstan-17alpha-methyl-17beta-ol-3-one (I) and 5beta-Androstan-17beta-ol-3-one (II) are included in item 23 of Schedule IV to the CDSA and are controlled substances.

August 10, 2005