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

Substance: Arimedex HD

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

- Controlled ☐
- Not Controlled  ✔

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

- The product does not contain substances similar to any of those listed in the CDSA.

Prepared by: ______________________________ Date: Aug 27th 2010

Evelyn Soo

Verified by: ______________________________ Date: __________

Marianne Tang

Approved by: ______________________________ Date: __________

DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: Hilary Taylor for compliance purposes.
Drug Status Report

Drug: Arimedex HD

Drug Name Status: Arimedex HD is the brand name.

Canadian Status: Arimedex is a nutritional supplement that is marketed as an aromatase inhibitor and testosterone boosting agent for body building purposes. The product is sold over the internet and can be found at: http://www.muscleandstrength.com/store/arimedex-hd.html#product-description. The product is claimed to contain the following ingredients:

- Niacin
- (3S,4S)-4-[(3,4-dimethoxyphenyl)methyl]-3-hydroxy-3-[(3-methoxy-4-[(2R,3R,4S,5R,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-phenyl)methyl]oxolan-2-one
- (2R,3S)-2,3-bis[(4-hydroxy-3-methoxyphenyl)methyl]butane-1,4-diol
- (2R,3R,4S,5S,6R)-6-(hydroxymethyl)oxane-2,3,4,5-tetrol
- (S)-5-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-3-decanone
- 4-[(E)-2-(3,5-dimethoxyphenyl)ethenyl]phenol
- Phenethyl(E)-3-(3,4-dihydroxyphenol)prop-2-enoate

Niacin is a naturally-occurring water-soluble vitamin of the B complex.

![Chemical Structure of Niacin](image)

Chemical Name: 3-Pyridinecarboxylic acid
Synonyms: Nicotinic acid
CAS-RN: 59-67-6
Molecular Formula: C₆H₅NO₂

(3S,4S)-4-[(3,4-dimethoxyphenyl)methyl]-3-hydroxy-3-[(3-methoxy-4-[(2R,3R,4S,5R,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-phenyl)methyl]oxolan-2-one is more commonly known as tracheloside and is a lignan isolated from the seeds of *Carthamus tinctorius* and has been shown to exhibit anti-estrogenic activity.

![Chemical Structure of Tracheloside](image)

Common Name: Tracheloside
Chemical Name: 2(3S-cis)-(3H)-Furanone, 4-((3,4-dimethoxyphenyl)methyl)-3-((4-(beta-D-glucopyranosyloxy)methoxyphenyl)methyl)dihydro-3-hydroxy-
CAS-RN: 33464-71-0
Molecular Formula: C₂₇H₃₄NO₁₂

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(2R,3S)-2,3-bis[(4-hydroxy-3-methoxyphenyl)methyl]butane-1,4,5-diol is more commonly known as secoisolariciresinol and is a lignan found in soft and hard woods\textsuperscript{3} as well as in flax seeds\textsuperscript{3} and is believed to display antioxidant activities.

**Common Name:** (+)-Secoisolariciresinol  
**Chemical Name:** (2R,3S)-2,3-bis[(4-hydroxy-3-methoxyphenyl)methyl]butane-1,4,5-diol  
**CAS-RN:** none; for (-)-isomer, 29388-59-8  
**Molecular Formula:** $C_{20}H_{26}O_6$

(2R,3R,4S,5S,6R)-6-(hydroxymethyl)oxane-2,3,4,5-tetrol is more commonly known as dextrose, a common form of sugar used in the food industry.

**Common Name:** Dextrose  
**Chemical Name:** (2R,3R,4S,5S,6R)-6-(hydroxymethyl)oxane-2,3,4,5-tetrol  
**Synonyms:** alpha-D-Glucopyranose, hydrate (1:1)  
**CAS-RN:** 14431-43-7  
**Molecular Formula:** $C_{20}H_{26}O_6$

(S)-5-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-3-decanone is more commonly known as Gingerol is a naturally-occurring plant phenol obtained from ginger and has been reported to display antioxidant activity\textsuperscript{4}.

**Common Name:** Gingerol  
**Chemical Name:** (S)-5-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-3-decanone  
**Synonyms:** (6)-Gingerol; (S)-(6)-Gingerol  
**CAS-RN:** 23513-14-6  
**Molecular Formula:** $C_{17}H_{26}O_4$

\textsuperscript{2}Umezawa, T et al. (1991) Formation of Lignans (-)-secoisolariciresinol and (-)-matairesinol with Forsythia intermedia cell-free extracts, J. Biol. Chem. \textbf{266}:10210-10217.


4-[(E)-2-(3,5-dimethoxyphenyl)ethenyl]phenol is more commonly known as pterostilbene and is an active constituent of blueberries that has been shown to display anti-cancer activity\(^5\)

**Common Name:** Pterostilbene  
**Chemical Name:** 4-(2-(3,5-Dimethoxyphenyl)ethenyl)phenol  
**Synonyms:** 3',5'-Dimethoxy-4-stilbenol; 3,5-Dimethoxy-4'-hydroxy-trans-stilbene  
**CAS-RN:** 537-42-8  
**Molecular Formula:** C\(_{16}\)H\(_{16}\)O\(_3\)

Phenethyl(E)-3-(3,4-dihydroxyphenol)prop-2-enoate is also known as caffeic acid phenethyl ester and is an active component of propolis from honeybee hives and has been shown to display anti-cancer, anti-inflammatory and immunomodulatory properties\(^6\).

**Common Name:** Caffeic acid phenethyl ester  
**Chemical Name:** 2-phenylethyl (3,4-dihydroxyphenyl)-2-propenoate  
**Synonyms:** Phenethyl caffeate; Capee  
**CAS-RN:** 104594-70-9  
**Molecular Formula:** C\(_{17}\)H\(_{16}\)O\(_4\)

None of the substances listed are listed in the CDSA or similar to any of the substances included in the Schedules to the CDSA.

**Recommendation:** Arimedex HD is not included in the Schedules to the CDSA and is not a controlled substance.

**Date:** 27 August 2010

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