



Health
Canada

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

Substance: Testek

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 substances are not similar to any of the substances listed in the CDSA.

Prepared by: _____ Date: Aug 17th 2010
Evelyn Soo

Verified by: _____ Date: _____
Marianne Tang

Approved by: _____ Date: _____
DIRECTOR, OFFICE OF CONTROLLED
SUBSTANCES

This status was requested by: Shawna St-Phar on behalf of the CBSA

Drug Status Report

Drug: Testek

Drug Name Status: Testek is a brand name.

Canadian Status: Testek is a dietary supplement that is marketed as a testosterone booster for body building purposes. The following substances are claimed to be the active ingredients of the product:

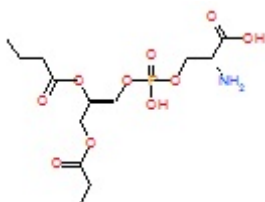
MyoBlast - Testosterone & Anabolic Growth Optimizer:

- SerinAid Phosphatidylserine
- AlphaSize Alpha-Glycerol Phosphoryl Choline
- N-acetyl-5-methoxytryptamine
- Nicotinoyl-GABA-m-Pycamilon

EstoFlavin- Anti-Aromatase/DHT Complex

- Hesperidin Flavanone Glycoside
- Phytosterol Complex (β-sitosterol, campesterol, stigmasterol, brassicasterol, stigmastanol and tocopherols)
- Lemon Balm Extract
- Lycopene

SerinAid® **Phosphatidylserine** is a phospholipid that is claimed to be derived from soy lecithin¹ and be effective in improving cognition.



Chemical Name: 1,2-Distearoyl phosphatidyl serine

Synonyms: 1,2-Distearoyl-en-3-glycerolphosphoserine
Diasterylphosphatidylserine; 4-(pyridine-3-carbonylamino)butanoic acid

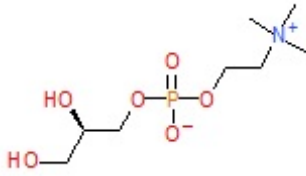
CAS-RN: 51446-62-9

Molecular Formula: C₁₃H₂₄NO₁₀P

Alpha-Glycerol Phosphoryl Choline is a phospholipid and has been shown in the scientific literature to be effective in treating memory loss and slowing down the structural changes in

¹<http://www.innovadex.com/Food/Detail/4327/120589/SERINAID>

the aging brain^{2,3}.



Chemical Name: Choline glycerophosphate

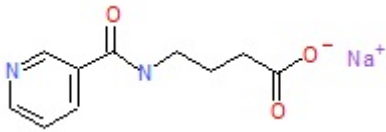
Synonyms: Choline alfoscerate is the proper INN name; (R)-2,3-dihydroxypropyl hydrogen phosphate, choline hydroxide

CAS-RN: 28319-77-0

Molecular Formula: C₈H₂₀NO₆P

The status of *N-acetyl-5-methoxytryptamine* has been previously reviewed and was considered not controlled under the CDSA.

Nicotinoyl-GABAm-Pycamilon is commonly known as picamilon, is a dietary supplement that is used for the treatment of anxiety⁴.



Chemical Name: 4-((3-pyridinylcarbonyl)amino)-butanoic acid, monosodium salt

Synonyms: Nicotinoyl-GABA sodium salt; N-Nicotinoyl-gamma-aminobutyric acid sodium salt; 4-(pyridine-3-carbonylamino)butanoic acid

CAS-RN: 62936-56-5

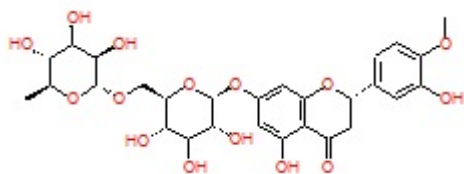
Molecular Formula: C₁₀H₁₁N₂O₃Na

²Canal, N. *et al.* (1991) Effect of L-alpha-glycerol-phosphorylcholine on amnesia caused by scopolamine, *Int J Clin Pharmacol. Ther. Toxicol.* **23**:103-107.

³Amenta, F. *et al.* (1994) Long term choline alfoscerate treatment counters age-dependent microanatomical changes in rat brain, *Prog. Neuro-Psychopharmacol. Biol. Psychiatry*, **18**:915-924.

⁴Shephard, RA. *et al.* (1987) Behavioral effects of GABA agonists in relation to anxiety and benzodiazepine action, *Life Sci*, **40**:2429-2436.

Hesperidin Flavanone Glycoside is a flavanoid that is found in citrus fruit and believed to provide antioxidant⁵, anti-inflammatory⁶ and sedative effects⁷.



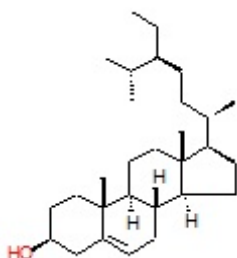
Chemical Name: 4H-1-benzopyran-4-one, 7-((6-Deoxy-alpha-L-mannopyranosyl)-beta-D-glucopyranosyl)oxy)-2,3-dihydro-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-, (2S)-

Synonyms: 3',5'-dihydroxy-4'-methoxy-7-rutinosyloxyflavan-4-on; hesperitin-7-rhamnoglucoside

CAS-RN: 62936-56-5

Molecular Formula: C₂₈H₃₄O₁₅

Phytosterol Complex (β -sitosterol, campesterol, stigmasterol, brassicasterol, stigmastanol and tocopherols) are phytosterols that display anti-inflammatory and anti-cancer effects⁸. The substances have not been shown in the scientific literature to display any anabolic activity.



Common Name: β -sitosterol

Chemical Name: Stigmast-5-en-3-beta-ol

Synonyms: (24R)-ethylcholest-5-en-3-beta-ol; 22,23-dihydrostigmasterol; 24a-ethylcholesterol

CAS-RN: 83-64-5

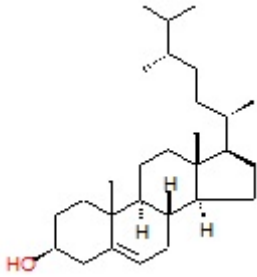
Molecular Formula: C₂₉H₅₀O

⁵Hirata A., *et al.* (2005) Kinetics of radical-scavenging activity of hesperetin and hesperidin and their inhibitory activity on COX-2 expression, *Anticancer Res.* **25**: 3367-337.

⁶Emim, JA. *et al.* (1994) Pharmacological evaluation of the anti-inflammatory activity of a citrus bioflavanoid, hesperidin, and the isoflavanoids, dauricin and claussequinone, in rats and mice, *J. Pharm. Pharmacol.* **46**:118-122.

⁷Loscalzo, LM. *et al.* (2008) Opioid receptors are involved in the sedative and antinociceptive effects of hesperidin as well as in its potentiation with benzodiazepines, *Eur J. Pharmacol.* **580**:306-313.

⁸Soo, C-Y. *et al.* (2004) Dose-dependent effects of dietary α - and γ -tocopherols on genetic instability in mouse mutator tumors, *J. Nat. Cancer Inst.* **96**:796-800.



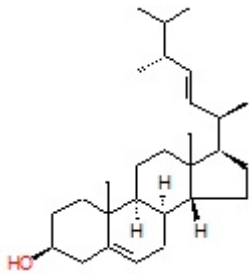
Common Name: Campesterol

Chemical Name: (24R)-Ergost-5-en-3-beta-ol

Synonyms: 24-methylcholesterol; 24a-methylcholesterol; delta5-24-isoergosten-3beta-ol; Stimast-5-en-3beta-ol

CAS-RN: 474-62-4

Molecular Formula: C₂₈H₄₈O



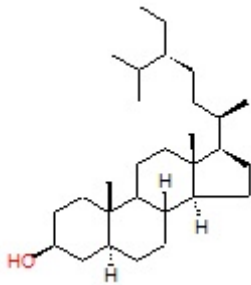
Common Name: Stigmasterol

Chemical Name: (24R)-5,22-Stigmastadien-3-beta-ol

Synonyms: Stigmasta-5,22-dien-3-beta-ol

CAS-RN: 83-48-7

Molecular Formula: C₂₈H₄₆O

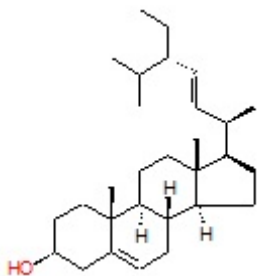


Common Name: Brassicasterol

Chemical Name: Ergosta-5,22(E)-dien-3-beta-ol

CAS-RN: 474-67-9

Molecular Formula: C₂₉H₅₂O



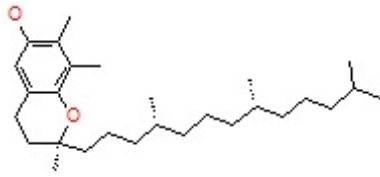
Common Name: Stigmastanol

Chemical Name: 24a-Ethylcholestanol

Synonyms: 5,6-Dihydro-b-sitosterol; (3b,5a)-stigamastan-3-ol; 5a-Stigmastan-3b-ol

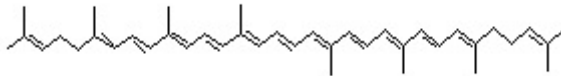
CAS-RN: 83-45-4

Molecular Formula: C₂₉H₄₈O



Chemical Name: Tocopherols
Synonyms: Methyltocols; tocopherol
CAS-RN: 1406-66-2
Molecular Formula: C₂₈H₄₈O₂

Lycopene is a phytochemical found in tomatoes and other red fruits and vegetables such as red carrots, watermelons and papaya. The substance is an intermediate in the biosynthesis of carotenoids such as beta-carotene and implicated in the prevention of prostate cancer. that has been shown to demonstrate antioxidant activity⁹



Chemical Name: Lycopene
Synonyms: CI 75125; psi,psi-carotene
CAS-RN: 502-65-8
Molecular Formula: C₄₀H₅₆

Recommendation: Testek does not contain any substances similar to those included in the Schedules to the CDSA and is not a controlled substance.

Date: 17 August 2010

⁹Giovanucci, E *et al.* (2002) A prospective study of tomato products, lycopene, and prostate cancer risk, *J. Natl. Cancer Inst.* **94**:391–396.