



FLORA RESEARCH LABORATORIES, LLC.  
ANALYTICAL REPORT

DATE: May 16, 2018

CLIENT: Lost Empire Herbs

JOB: J18-0502-D

REPORT: Qualitative Screen for PDE-5 Inhibitor Drugs and Analogues by High Performance Liquid Chromatography-DAD-Accurate Mass Q-TOF (HPLC-DAD-AM-Q-TOF)

FRL SAMPLE ID: 180502013

CLIENT SAMPLE ID: PP013018 Pine Pollen

Compound	Result	Compound	Result
(-)-Trans-tadalafil (ent-Tadalafil)	ND	Lodenafil carbonate	ND
Acetaminotadalafil	ND	Mirodenafil	ND
Acetil acid	ND	Mutaproduenafil	ND
Acetildenafil (Hongdenafil)	ND	N-butylnortadalafil	ND
Acetylvardenafil	ND	N-desethylvardenafil	ND
Aildenafil (Dimethylsildenafil, Methisosildenafil)	ND	N-desmethylsildenafil	ND
Aminotadalafil	ND	Nitrodenafil	ND
Avanafil	ND	Nitroso-prodenafil	ND
Benzylsildenafil	ND	N-octylnortadalafil (Octylnortadalafil)	ND
Carbodenafil (Fondenafil)	ND	Noracetildenafil (Demethylhongdenafil)	ND
Chlorodenafil	ND	Norneosildenafil (Piperidinosildenafil)	ND
Chloropretadalafil	ND	Norneovardenafil	ND
Cinnamylidenafil	ND	Nortadalafil (Demethyltadalafil)	ND
Cyclopentynafil	ND	Oxohongdenafil	ND
Depiperazinothiosildenafil	ND	Piperazinonafil (Piperazonafil, Dihydroacetildenafil)	ND
Descarbonsildenafil	ND	Piperidinoacetildenafil (Piperiacetildenafil)	ND
Desmethylcarbodenafil	ND	Piperidinoardenafil (Piperidenafil, Pseudovardenafil)	ND
Dimethylacetildenafil	ND	Propoxyphenyl aildenafil	ND
Dioxo-acetildenafil	ND	Propoxyphenyl hydroxyhomosildenafil (Methylhydroxyhomosildenafil)	ND
Dithio-desmethylcarbodenafil	ND	Propoxyphenyl sildenafil	ND
Gendenafil	ND	Propoxyphenyl thioaildenafil (Propoxyphenyl thiomethisosildenafil)	ND
Gisadenafil	ND	Propoxyphenyl thiohydroxyhomosildenafil	ND
Homosildenafil	ND	Sildenafil	ND
Hydroxyacetildenafil (Hydroxyhongdenafil)	ND	SR-aminotadalafil ((+)-trans-aminotadalafil)	ND
Hydroxychlorodenafil	ND	Tadalafil (Tildenafil)	ND
Hydroxyhomosildenafil	ND	Thioaildenafil (Sulfoaildenafil, Thiomethisosildenafil, Sulfodimethyl sildenafil, Dimethylthiosildenafil)	ND
2-Hydroxypropylnortadalafil	ND	Thiohomosildenafil (Sulfohomosildenafil, Homosildenafil thione)	ND
Hydroxythiohomosildenafil (hydroxyhomosildenafil thione, sulfohydroxyhomosildenafil)	ND	Thioquinapiperifil (KF31327)	ND
Hydroxythioardenafil	ND	Thiosildenafil (Sulfosildenafil, Sildenafil thione)	ND
Hydroxyvardenafil	ND	Udenafil	ND
Imidazosagatriazinone (Desulfovardenafil)	ND	Vardenafil	ND
Isopiperazinonafil	ND	Xanthoanthrafil (Benzamidenafil)	ND

ANALYSIS DATA: (ND= not detected @100 ug/g (PPM), POS= positive, TRACE= trace detected).

DISCUSSION: The sample was prepared with a split spike for quality control. Analysis is conducted by HPLC using DAD and Accurate Mass Q-TOF Mass Spectrometry. The DAD traces are examined for peaks giving spectra indicative of known PDE-5 inhibitors. MS data is processed and searched in the Scripts Metlin Database. Accurate mass and formulae generated are compared to known PDE-5 inhibitors. No PDE-5 inhibitors were detected in the sample.

CONCLUSION: No PDE-5 inhibitors were detected in this sample.

Assayed/Reported By:

James Neal-Kababick, Laboratory Director

Date: 5/16/18

1000 SE M Street Unit B, Grants Pass, Oregon 97526  
Ph: (541) 472-0980 Fax: (541) 472-0981