

1847563-0

Report Date: 21-Jun-2017

Report Status: Final

Certificate of Analysis

Stacker2 Europe BV

Geerweg 2 Sittard 6135KC Netherlands

Sample Name:	Rush V4 F70871	Covance Sample:	6209071
Project ID	STACKER2-20170606-0001	Receipt Date	06-Jun-2017
PO Number	CVD	Receipt Condition	Ambient temperature
Sample Serving Size		Login Date	06-Jun-2017
		Online Order	30

Analysis Result Wator Soluble Vitamins by LC-MS/MS 20900 mcg/100g Yohimbe * Not Detected Elements by ICP Mass Spectrometry
Pyridoxine 20900 mcg/100g Yohimbe * Not Detected Elements by ICP Mass Spectrometry Total Cadmium < 1.00 mcg/100g Lead 0.97 mcg/100g Mercury 1.05 mcg/100g Screening Method for the Detection of Adulterants in Weight Loss Supplements * 1-Phenylethylamine < 10000 mcg/100g 2-Methylamino-1-phenylbutane < 200 mcg/100g 2-Phenylethylamine < 10000 mcg/100g Aegeline < 2000 mcg/100g Amphetamine < 1000 mcg/100g Benfluorex < 1000 mcg/100g Benzyl Sibutramine < 100 mcg/100g Benzyl Sibutramine < 100 mcg/100g Busecodyl < 100 mcg/100g Burpopion < 1000 mcg/100g Cellistat < 1000 mcg/100g Chloro-Sibutramine < 200 mcg/100g Dapoxetine < 1000 mcg/100g Dictofenac < 1000 mcg/100g Emodin < 5 mcg/g Ephedrine < 100 mcg/100g Ephedrine, methylpseudo- < 100 mcg/100g Ephedrine, methyl- < 100 mcg/10
Yohimbe * Not Detected Elements by ICP Mass Spectrometry -1.00 mcg/100g Lead 0.97 mcg/100g Mercury 10.5 mcg/100g Screening Method for the Detection of Adulterants in Weight Loss Supplements* 1-Phenylethylamine <10000 mcg/100g
Foliments by ICP Mass Spectrometry Cadmium <1.00 mcg/100g
Elements by ICP Mass Spectrometry
Cadmium <1.00 mcg/100g
Lead Mercury 0.97 mcg/100g Screening Method for the Detection of Adulterants in Weight Loss Supplements* 1-Phenylethylamine <10000 mcg/100g
Mercury 10.5 mcg/100g Screening Method for the Detection of Adulterants in Weight Loss Supplements* 1-Phenylethylamine <10000 mcg/100g
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1-Phenylethylamine <10000 mcg/100g
2-Methylamino-1-phenylbutane <200 mcg/100g
2-Phenylethylamine <10000 mcg/100g
Aegeline <2000 mcg/100g
Amphetamine <100 mcg/100g
Benfluorex <1000 mcg/100g
Benzphetamine <100 mcg/100g
Benzyl Sibutramine <100 mcg/100g
Bisacodyl <100 mcg/100g
Bumetanide <1000 mcg/100g
Bupropion <100 mcg/100g
Cetilistat <10000 mcg/100g
Chloro-Sibutramine <200 mcg/100g
Dapoxetine <1000 mcg/100g
Diclofenac <10 mcg/g
Diethylpropion (Amfepramone) <100 mcg/100g
Emodin <5 mcg/g
Ephedrine<100 mcg/100g
Ephedrine, methylpseudo-<100 mcg/100g
Ephedrine, methyl- <100 mcg/100g Ephedrine, nor- <100 mcg/100g
Ephedrine, nor- <100 mcg/100g
Ephedrine, pseudo- <100 mcg/100g
Fenfluramine <100 mcg/100g
Fenproporex <100 mcg/100g
Fluoxetine <1000 mcg/100g
Furosemide <10000 mcg/100g
Glybenclamide <1000 mcg/100g
Homosibutramine <200 mcg/100g
Hordenine <500 mcg/100g

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Analysis	Result	
Screening Method for the Detection of Adulterants in Weight Loss Supplements *		
Lorcaserin	<1000 mcg/100g	
Metformin	<1000 mcg/100g	
Methylphenethylamine, beta	<100 mcg/100g	
N,N-Dimethylphenylethylamine	<100 mcg/100g	
N-Desmethyl sertraline	<1000 mcg/100g	
N-Desmethyl sibutramine	<100 mcg/100g	
N-Didesmethyl sibutramine	<200 mcg/100g	
N,alpha-Diethylphenethylamine	<100 mcg/100g	
N-Formyl N,N-Didesmethyl Sibutramine	<200 mcg/100g	
NIDA-41020	<200 mcg/100g	
N-Methyltryptamine	<200 mcg/100g	
N-Methyltyramine	<100 mcg/100g	
Octopamine	<100000 mcg/100g	
Orlistat	<1000 mcg/100g	
Paroxetine	<200 mcg/100g	
Phendimetrazine	<100 mcg/100g	
Phenolphthalein	<1000 mcg/100g	
Phentermine	<200 mcg/100g	
Phenytoin	<10000 mcg/100g	
Picamilon	<1000 mcg/100g	
Propranolol	<500 mcg/100g	
Rimonabant	<200 mcg/100g	
Sertraline	<100 mcg/100g	
Sibutramine	<100 mcg/100g	
Synephrine	<1000 mcg/100g	
Theobromine	<2000 mcg/100g	
Theophylline	<2000 mcg/100g	
Topiramate	<2000 mcg/100g	
Tyramine	<2000 mcg/100g	
Polycyclic Aromatic Hydrocarbons-Low Level *		
Benz(a)anthracene	0.025 mcg/100g	
Benzo(a)pyrene	<0.025 mcg/100g	
Benzo(b)fluoranthene	<0.025 mcg/100g	
Benzo(g,h,i)perylene	<0.025 mcg/100g	
Benzo(k)fluoranthene	<0.025 mcg/100g	
Chrysene	0.051 mcg/100g	
Dibenz(a,h)anthracene	<0.025 mcg/100g	
Indeno(1,2,3-c,d)pyrene	<0.025 mcg/100g	

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		Online Order	30

Analysis Result

Polycyclic Aromatic Hydrocarbons-Low Level *

Pyrene 0.090 mcg/100g

Method References Testing Location

Elements by ICP Mass Spectrometry (ICP_MS_S)

Covance Laboratories - Harrogate

Official Methods of Analysis, Method 2011.19 and 993.14, AOAC INTERNATIONAL, (Modified).

Polycyclic Aromatic Hydrocarbons-Low Level (LLPAH_S)

Covance Laboratories - Madison

Covance Inc. developed method

Screening Method for the Detection of Adulterants in Weight Loss Supplements (ADULTER1_S)

Covance Laboratories - Madison

Lukas Vaclavik, Alexander J. Krynitsky, Jeanne I. Rader, "Mass spectrometric analysis of pharmaceutical adulterants in products labeled as botanical dietary supplements or herbal remedies: a review.," Analytical and Bioanalytical Chemistry, 27: 6767-6790 (2014).

B.J. Venhuisa, M.E. Zwaagstrab, P.H.J. Keizersa, D. de Kaste, "Dose-to-dose variations with single packages of counterfeit medicines and adulterated dietary supplements as a potential source of false negatives and inaccurate health risk assessments," Journal of Pharmaceutical and Biomedical Analysis, 89:158-165 (2014).

Daniel J. Mansa, Ashley C. Gucinskia, Jamie D. Dunna, Connie M. Gryniewicz-Ruzickaa, Laura C. Mecker-Poguea, Jeff L.-F. Kaob, Xia Geb, "Rapid screening and structural elucidation of a novel sibutramine analogue in a weight loss supplement: 11-Desisobutyl-11-benzylsibutramine," Journal of Pharmaceutical and Biomedical Analysis, 83:122-128 (2013).

Maciej J. Bogusz, Huda Hassan, Eid Al-Enazi, Zuhour Ibrahim, Mohammed Al-Tufail, "Application of LC-ESI-MS-MS for detection of synthetic adulterants in herbal remedies," Journal of Pharmaceutical and Biomedical Analysis, 41: 554-564 (2006).

Water Soluble Vitamins by LC-MS/MS (BLCMS_S)

Covance Laboratories - Harrogate

Covance Developed Method

Yohimbe (YOHIMBE_S)

Analytical laboratories in Anaheim, Inc.

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Testing Location(s)

Released on Behalf of Covance by

Covance Laboratories - Harrogate

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Harrogate North Yorkshire, United Kingdom HG3 1PY
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Covance Laboratories - Madison

Edward Ladwig - Director

Andrew Hockin - Director

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