

Certificate of Analysis

Stacker2 Europe BV

Geerweg 2
Sittard 6135KC Netherlands

Sample Name:	Muscle Transform	Covance Sample:	7381694
Project ID	STACKER2-20180611-0002	Receipt Date	11-Jun-2018
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	F81576	Login Date	11-Jun-2018
Sample Serving Size	1 Cap	Online Order	30

Analysis	Result
Calculated Sample Weight *	
Entity Weight	0.8134 g
Entity Weight	0.8133 g
Entity Fill Weight	0.7054 g
Elements by ICP Mass Spectrometry	
Cadmium	37.7 ppb
Lead	112 ppb
Mercury	<5.00 ppb
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	<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	<1000 mcg/100g
Diethylpropion (Amfepramone)	<100 mcg/100g
Emodin	<500 mcg/100g
Ephedrine	<100 mcg/100g
Ephedrine, methylpseudo-	<100 mcg/100g
Ephedrine, methyl-	<100 mcg/100g
Ephedrine, nor-	<100 mcg/100g
Ephedrine, norpseudo-	<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

* This analysis is not ISO accredited.

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Analysis
Result
Screening Method for the Detection of Adulterants in Weight Loss Supplements *

Hordenine	<500 mcg/100g
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	3800 mcg/100g
Theophylline	<2000 mcg/100g
Topiramate	<2000 mcg/100g
Tyramine	<2000 mcg/100g

Polycyclic Aromatic Hydrocarbons-Low Level

Benz(a)anthracene	4.10 ppb
Benzo(a)pyrene	3.23 ppb
Benzo(b)fluoranthene	4.92 ppb
Chrysene	6.62 ppb
Sum of PAH4 analytes	18.9 ppb

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Method References	Testing Location
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Calculated Sample Weight (PREP)	Covance Laboratories - Madison
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Calculated Sample Weight (PREP_HAR)	Covance Laboratories - Harrogate
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Elements by ICP Mass Spectrometry (ICP_MS_S)	Covance Laboratories - Harrogate
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Official Methods of Analysis, Method 2011.19 and 993.14, AOAC INTERNATIONAL, (Modified).
Pequette, L.H., Szabo, A., Thompson, J.J., "Simultaneous Determination of Chromium, Selenium, and Molybdenum in Nutritional Products by Inductively Coupled Plasma/Mass Spectrometry: Single-Laboratory Validation," Journal of AOAC International, 94(4): 1240 - 1252 (2011).

Polycyclic Aromatic Hydrocarbons-Low Level (LLPAH_S)	Covance Laboratories - Madison
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Covance Inc. developed method

Screening Method for the Detection of Adulterants in Weight Loss Supplements (ADULTER1_S)	Covance Laboratories - Madison
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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-Ruzicka, 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).

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Testing Location(s)

Released on Behalf of Covance by

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Andrew Hockin - Director



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