

Certificate of Analysis

Citadel Nutrition

Sample Name:	Tier 1 / Lot #1498L01	Covance Sample:	2142887
Project ID	CITADEL_NU-20130522-0002	Receipt Date	20-May-2013
PO Number	N/A	Receipt Condition	Ambient temperature
Sample Serving Size	12.5 g	Login Date	22-May-2013
		Storage Condition	-20 (+/- 10) Degrees Celsius
		Online Order	20

Analysis	RSD	Percent of Label Claim	Specifications	Result
Free amino acids				
Tyrosine	2.0%	113%	3.00 g/Serving Size	3.38 g/Serving Size
Beta-alanine	0.0%	103%	3.20 g/Serving Size	3.30 g/Serving Size
Creatine				
Creatine Monohydrate	NA	104%	5.00 g/Serving Size	5.19 g/Serving Size
Creatinine	NA			<0.063 g/Serving Size
Caffeine				
Caffeine	6.0%	105%	200 mg/Serving Size	210 mg/Serving Size

Method References	Testing Location
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Caffeine (CAFR_S:7)	Covance Laboratories - Madison
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Journal of Food Science (modified), 48: 745-747, (1983).

Creatine (CREA_S:4)	Covance Laboratories - Madison
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Analytical Biochemistry 214, pp. 278-283 (1993).

Free amino acids (FAALC_S:7)	Covance Laboratories - Madison
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R. Schuster, "Determination of Amino Acids in Biological, Pharmaceutical, Plant and Food Samples by Automated Precolumn Derivatization and HPLC", Journal of Chromatography, 1988, 431, 271-284.

Henderson, J.W., Ricker, R.D. Bidlingmeyer, B.A., Woodward, C., "Rapid, Accurate, Sensitive, and Reproducible HPLC Analysis of Amino Acids, Amino Acid Analysis Using Zorbax Eclipse-AAA columns and the Agilent 1100 HPLC," Agilent Publication, 2000.

Testing Location(s)	Released on Behalf of Covance by
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Covance Laboratories - Madison	Lori Ross - Associate Director
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