

December 16, 2015

Diet Standards  
 4023 Kennett Pike  
 Suite 54624  
 Wilmington, DE 19807

**CERTIFICATE OF ANALYSIS**

AR-15-KK-019962-01  
 Batch #: EUCAPE-00075589

**Sample Identification:**

Sample #: 740-2015-00019457  
 Description: AminoHD1000 BCAA Branch Chain Amino Acid 2:1:1 Ratio of Leucine: Isoleucine: Valine  
 Vegetable Capsules No other Ingredients, Lot #20513, 2nd Batch Ordered, Production Date:  
 19NOV2015  
 Condition: Capsules filled with white powder in a ziplock bag received at room temperature.  
 Date Received: November 23, 2015

**KK02W: Heavy Metals (As, Cd, Hg, and Pb)**

Method Reference: AOAC 993.14 Mod.

Completed: 12/03/2015

	Result	Theoretical Level
Arsenic (As)	*0.010 ppm	None ppm
Cadmium (Cd)	<0.001 ppm	None ppm
Lead (Pb)	*0.006 ppm	None ppm
Mercury (Hg)	0.337 ppm	None ppm

**KK130: Average content weight**

Method Reference: N/A

Completed: 12/14/2015

	Result	Theoretical Level
Average content weight	465.48 mg/Capsule	None mg/capsule

**KK506: BCAA Profile, Free (HPLC) with OPA/Fmoc Derivatization**

Method Reference: Internal Method

Completed: 12/16/2015

	Result	Theoretical Level
Valine (Free)	106 mg/Capsule	125 mg/capsule
Isoleucine (Free)	121 mg/Capsule	125 mg/capsule
Leucine (Free)	223 mg/Capsule	250 mg/capsule

**QA045: Residual Solvents (Class 1)**

**Method Reference:** USP/NF 467 (Modified)

**Completed:** 12/03/2015

	<b>Result</b>	<b>Theoretical Level</b>
Benzene	<2.0 µg/g	None µg/g
Carbon tetrachloride	<4.0 µg/g	None µg/g
1,2-Dichloroethane	<5.0 µg/g	None µg/g
1,1-Dichloroethene	<3.0 µg/g	None µg/g
1,1,1-Trichloroethane	<10 µg/g	None µg/g
Sample extraction solvent	DI WATER	None

**QA046: Residual Solvents (Class 2)**

**Method Reference:** USP/NF 467 (Modified)

**Completed:** 12/03/2015

	<b>Result</b>	<b>Theoretical Level</b>
Acetonitrile	<50 µg/g	None µg/g
Chlorobenzene	<5.0 µg/g	None µg/g
Chloroform	<5.0 µg/g	None µg/g
Cumene	<5.0 µg/g	None µg/g
Cyclohexane	<5.0 µg/g	None µg/g
1,2-Dichloroethene	<5.0 µg/g	None µg/g
1,2-Dimethoxyethane	<5.0 µg/g	None µg/g
N,N-Dimethylacetamide	<5.0 µg/g	None µg/g
N,N-Dimethylformamide	<5.0 µg/g	None µg/g
1,4-Dioxane	<5.0 µg/g	None µg/g
2-Ethoxyethanol	<50 µg/g	None µg/g
Ethylene glycol	<50 µg/g	None µg/g
Formamide	<50 µg/g	None µg/g
Hexane	<5.0 µg/g	None µg/g
Methanol	<100 µg/g	None µg/g
2-Methoxyethanol	<50 µg/g	None µg/g
Methylbutylketone	<5.0 µg/g	None µg/g
Methylcyclohexane	<5.0 µg/g	None µg/g
Methylene Chloride	<5.0 µg/g	None µg/g
N-Methyl-pyrrolidone	<50 µg/g	None µg/g
Nitromethane	<5.0 µg/g	None µg/g
Pyridine	<50 µg/g	None µg/g
Sulfolane	<50 µg/g	None µg/g
Tetrahydrofuran	<5.0 µg/g	None µg/g
Tetralin	<50 µg/g	None µg/g
Toluene	<5.0 µg/g	None µg/g
Trichloroethylene	<5.0 µg/g	None µg/g
Xylenes	<5.0 µg/g	None µg/g
Sample extraction solvent	DI WATER/METHANOL	None

**QA12S: Residual Solvents (Class 3)**

**Method Reference:** USP/NF 467 (Modified)

**Completed:** 12/03/2015

	<b>Result</b>	<b>Theoretical Level</b>
Acetic acid	<200 µg/g	None µg/g
Acetone	<200 µg/g	None µg/g
Anisole	<200 µg/g	None µg/g
1-Butanol	<200 µg/g	None µg/g
2-Butanol	<200 µg/g	None µg/g
Butyl acetate	<200 µg/g	None µg/g
tert-Butylmethyl ether	<200 µg/g	None µg/g
Dimethyl Sulfoxide (DMSO)	<200 µg/g	None µg/g
Ethanol	<200 µg/g	None µg/g
Ethyl acetate	<200 µg/g	None µg/g
Ethyl Ether	<200 µg/g	None µg/g
Ethyl formate	<200 µg/g	None µg/g
Formic acid	<200 µg/g	None µg/g
Heptane	<200 µg/g	None µg/g
Isobutyl acetate	<200 µg/g	None µg/g
Isopropyl acetate	<200 µg/g	None µg/g
Methyl acetate	<200 µg/g	None µg/g
3-methyl 1-butanol	<200 µg/g	None µg/g
Methylethylketone	<200 µg/g	None µg/g
Methylisobutylketone	<200 µg/g	None µg/g
2-Methyl-1-propanol	<200 µg/g	None µg/g
Pentane	<200 µg/g	None µg/g
1-Pentanol	<200 µg/g	None µg/g
1-Propanol	<200 µg/g	None µg/g
2-Propanol	<200 µg/g	None µg/g
Propyl acetate	<200 µg/g	None µg/g
Sum of Class 3 solvents	<5,000 mg/kg	None mg/kg

**UMGSH: Salmonella - USP Chapter <62>**

**Method Reference:** U.S. Pharmacopeia Chapter 62

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Salmonella	Not Detected per 10 g	None /10 g

**UMI9G: Staphylococcus aureus - USP Chapter <62>**

**Method Reference:** U.S. Pharmacopeia Chapter 62

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Staphylococcus aureus	Not Detected per 10 g	None /10 g

**UMMYZ: Total Aerobic Microbial Count - USP Chapter <61>**

**Method Reference:** U.S. Pharmacopeia Chapter 61

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Total Aerobic Microbial Count	<10 (est) cfu/g	None cfu/g

**UMR5L: Moulds - USP Chapter <61>**

**Method Reference:** U.S. Pharmacopeia Chapter 61

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Moulds	<10 (est) cfu/g	None cfu/g

**UMR5L: Yeast - USP Chapter <61>**

**Method Reference:** U.S. Pharmacopeia Chapter 61

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Yeast	<10 (est) cfu/g	None cfu/g

**UMR5L: Yeast & Moulds - USP Chapter <61>**

**Method Reference:** U.S. Pharmacopeia Chapter 61

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Yeast & Moulds	<10 (est) cfu/g	None cfu/g

**UMRU4: Escherichia Coli - USP Chapter <62>**

**Method Reference:** U.S. Pharmacopeia Chapter 62

**Completed:** 11/30/2015

	<b>Result</b>	<b>Theoretical Level</b>
Escherichia Coli	Not Detected per 10 g	None /10 g

\* Analyte detected below the LOQ but above the LOD. This result is considered an estimated concentration.

Results pertain only to the items tested.

All results are reported on an as-is basis unless otherwise stated.

Estimation of uncertainty of measurement is available upon request.

Results shall not be reproduced except in full without written permission from Eurofins Scientific, Inc.



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