

REPORT NUMBER

15-147-4100

REPORT DATE
May 27, 2015
 RECEIVED DATE
May 16, 2015

SEND TO
28303



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ISSUE DATE
May 27, 2015

**THUNDER NUTRITION
 244 EAST AVE K10 #107
 LANCASTER, CA 93536**

**REPORT OF ANALYSIS
 For: (28303) THUNDER NUTRITION
 AMINO BOOST ANALYSIS**

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: THUNDER AMINO BOOST Lab Number: 2401448						
Aspartic acid	0.71	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Threonine	0.30	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Serine	0.36	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Glutamic acid	1.20	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Proline	0.83	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Glycine	1.12	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Alanine	0.80	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Cystine	0.19	%	0.01	AOAC 994.12 (Alt. I) *	jjd8-2015/05/23	tjp8-2015/05/27
Valine	0.37	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Methionine	0.24	%	0.01	AOAC 994.12 (Alt. I) *	jjd8-2015/05/23	tjp8-2015/05/27
Isoleucine	0.43	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Leucine	0.70	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Tyrosine	0.19	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Phenylalanine	0.34	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Lysine (total)	0.66	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Histidine	0.20	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Arginine	0.83	%	0.01	AOAC 994.12 (Alt. III) *	jjd8-2015/05/22	tjp8-2015/05/27
Tryptophan	0.05	%	0.01	AOAC 988.15 (mod) *	aln9-2015/05/20	tjp8-2015/05/22
Fat (acid hydrolysis)	10.8	%	0.1	AOAC 922.06 (mod) *	tns3-2015/05/21	ems4-2015/05/21

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

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**THUNDER NUTRITION
244 EAST AVE K10 #107
LANCASTER, CA 93535**

REPORT OF ANALYSIS
For: (28303) THUNDER NUTRITION
AMINO BOOST ANALYSIS

Analysis	Level Found As Received	Units	Reporting Limit	Method	Analyst- Date	Verified- Date
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All results are reported on an AS RECEIVED basis.

For questions please contact:

Rob Ferris
Account Manager
rob.ferris@midwestlabs.com (402)829-9871

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REPORT OF ANALYSIS
For: (28303) THUNDER NUTRITION
AMINO BOOST ANALYSIS

Detailed Method Description(s)

AOAC 994.12 (Alt. III) total amino acids-hydrolysis

A small amount of a homogenous sample is digested using a combination of heat and hydrochloric acid to break down the peptide bonds between the amino acids. The extract is treated to clean it up and then an aliquot is injected into the HPLC using a post-column derivatization apparatus and ninhydrin as the chromophore. This method cannot determine tryptophan. The amino acids cystine and methionine must undergo special treatment before they can be analyzed by this procedure.

AOAC 994.12 (Alt. I) - cystine & methionine

Sample analysis follows MWL HPLC 019 which is based on AOAC 994.12 (Alt I). A small amount of a homogenous sample initiall treated with performic acid to prevent oxidation of cystine and methionine and then this extract is digested using a combination of heat and hydrochloric acid to break down the peptide bonds between the amino acids. The extract is treated to clean it up and then an aliquot is injected into the HPLC using a post-column derivatization apparatus and ninhydrin as the chromophore.

AOAC 988.15 - tryptophan

Sample analysis follows MWL HPLC 025 which is based on AOAC 988.15. A small amount of a homogenous sample is hydrolyzed using a base (sodium hydroxide) and nitrogen blanketed extraction and heat. After the hydrolysis, the extract is cleaned-up and injected into the liquid chromatogram (LC) using a mass selective detector (LC/MS).

Fat (acid hydrolysis)

Analysis follows MWL FO 08 which is based on AOAC 922.06. The homogenized sample is treated with hydrochloric acid and then washed at least twice with both petroleum ether and diethyl ether and the solution placed in a pre-weighed container. The ether solution, which contains the dissolved fat, is evaporated and the percent fat determined by the weight gain of the beaker.

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