

**ENP INC
PO BOX 618
MENDOTA IL 61342**

REPORT OF ANALYSIS

For: (26756) ENP INC
FERTILIZER ANALYSIS

Analysis	Level Found	Reporting			Analyst- Date	Verified- Date
	As Received	Units	Limit	Method		
Sample ID: L-ARGININIUM PHOSPHITE	Lab Number: 2787231	Date Sampled: 2018-03-11				
Nitrogen (total)	14.11	%	0.01	MWL WC PROC 55	tat9-2018/03/16	asl4-2018/03/19
Phosphate (P2O5)	17.4	%	0.10	MWL ME PROC 26	Auto-2018/03/16	asl4-2018/03/19
Potash (K2O)	n.d.	%	0.05	MWL ME PROC 26	Auto-2018/03/16	asl4-2018/03/19
Aspartic acid	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Threonine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Serine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Glutamic acid	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Proline	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Glycine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Alanine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Cystine	n.d.	%	0.01	AOAC 994.12 (Alt. I)	ljk9-2018/03/23	tjp8-2018/03/23
Valine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Methionine	n.d.	%	0.01	AOAC 994.12 (Alt. I)	ljk9-2018/03/23	tjp8-2018/03/23
Isoleucine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Leucine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Tyrosine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Phenylalanine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Lysine (total)	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22
Histidine	n.d.	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/22

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

**ENP INC
PO BOX 618
MENDOTA IL 61342**

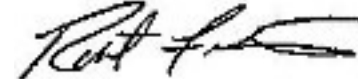
REPORT OF ANALYSIS

For: (26756) ENP INC
FERTILIZER ANALYSIS

Analysis	Level Found	Units	Reporting		Analyst- Date	Verified- Date
	As Received		Limit	Method		
Sample ID: L-ARGININIUM PHOSPHITE	Lab Number: 2787231 (con't)					
Arginine	44.9	%	0.01	AOAC 994.12 (Alt. III)	ljk9-2018/03/22	tjp8-2018/03/23
Tryptophan	n.d.	%	0.01	AOAC 988.15 (mod)	ljk9-2018/03/23	tjp8-2018/03/23

All results are reported on an AS RECEIVED basis., n.d. = not detected

For questions please contact:



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

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

**ENP INC
PO BOX 618
MENDOTA IL 61342****REPORT OF ANALYSIS****For: (26756) ENP INC
FERTILIZER 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 LC/MS/MS. This method cannot determine tryptophan. The amino acids cystine and methionine must undergo special treatment before they can be analyzed by this procedure.

AOAC 993.13 (mod) manure

Analysis follows MWL WC 055 which is based on AOAC 993.13. Samples are ground to a fine, homogenous consistency and a small amount weighed and introduced into the instrument. The sample is burned in the presence of oxygen to release gases such as carbon dioxide, nitrogen, and hydrogen and the levels of a specific gas determined and reported.

ICP Analysis Fertilizers AOAC 985.01 (mod)

Analysis follows MWL ME 026 which is based on AOAC 985.01. Samples have been prepared using MWL WC 056. Total minerals in fertilizers have been prepared by AOAC 957.02 using mineral acids and heat. Water soluble manganese is prepared by AOAC 972.03 and the other water soluble by AOAC 977.01. Sample analysis involves moving the sample extract into the ICP where it is nebulized and introduced into the high temperature plasma which energizes the electrons of the dissolved minerals/metals. As the energized electrons of the minerals/metals return to ground state, energy is released as light. The emitted wavelength(s) and light intensities are used to identify and quantitate the minerals/metals in the sample

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 performiic 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.

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER

18-082-4140

REPORT DATE
Mar 23, 2018

RECEIVED DATE
Mar 14, 2018

SEND TO
26756



13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770

www.midwestlabs.com

PAGE 4/4

ISSUE DATE
Mar 23, 2018

**ENP INC
PO BOX 618
MENDOTA IL 61342**

REPORT OF ANALYSIS

**For: (26756) ENP INC
FERTILIZER ANALYSIS**

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).

AOAC 957.02 (P2O5 preparation)

Samples are treated with hydrochloric acid and nitric acid on a hot plate to destroy organic material and dissolve phosphate.

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

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.