



EAG
Laboratories



Test Report

Screening for Seven Specified Compounds in Fertilizer-Related Products

TDM Corporation AKA Nano Gro Max

Todd Davis

todd.davis@drivealertnow.com

184 Wire Dr.

Andrews, SC 29510

USA

EAG Job #V1MKM873

REVISION	DESCRIPTION	DATE
0	Initial report.	September 23, 2021
1	Updated company name from "Nug Thug International Corp" to "TDM corporation AKA Nano Gro Max"	January 11, 2023

2672 METRO BOULEVARD
MARYLAND HEIGHTS, MISSOURI 63043

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EXECUTIVE SUMMARY FOR
Todd Davis
TDM Corporation AKA Nano Gro Max
 January 11, 2023

STUDY OBJECTIVE

V1MKM873 The objective was to screen two fertilizer-related products for seven specified compounds.

SUMMARY OF ANALYTICAL RESULTS AND INTERPRETATIONS

The submitted samples, "RootMAX" and "GroMAX", were analyzed by High Performance Liquid Chromatography with Ultraviolet Detection (HPLC/UV) to screen for the following seven specified compounds:

1. 1-naphthol (CAS No.: 90-15-3)
2. 4-chlorophenoxyacetic acid (CAS No.: 122-88-3)
3. indole-3-acetic acid (CAS No.: 87-51-4)
4. 4-(3-indolyl) butyric acid (CAS No.: 133-32-4)
5. alpha-naphthaleneacetic acid (CAS No.: 86-87-3)
6. 1-Naphthylacetamide (CAS No.: 86-86-2)
7. beta-naphthoxyacetic acid (CAS No.: 120-23-0)

The samples were analyzed as-received (i.e. neat) alongside analytical reference standards of each of the seven specified compounds. None of the seven specified compounds were detected in either sample. Further information on the analysis may be found in the body of the report.

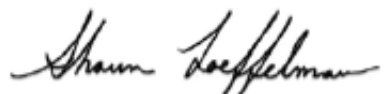
SAMPLE LOG-IN

SAMPLE NUMBER	DESCRIPTION	DATE RECEIVED
S1	RootMAX	07 Sep 2021
S2	GroMAX	07 Sep 2021

Please remember we dispose of samples 30 days after the date of this Executive Summary unless instructed otherwise.

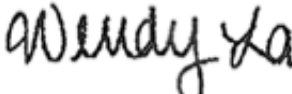
Thank You for choosing Eurofins EAG Materials Science, LLC. Please feel free to contact either reviewer with any questions or comments associated with this report or any additional work. We look forward to working with you in the future.

Reviewed By:



Shaun Loeffelman, M.S.
 Manager of Analytical Services

Reviewed By:



Wendy La
 Technical Specialist

Prepared By:



Alan Scheibel
 Analyst

We want your feedback! Please visit us at <https://www.eag.com/survey/?job=V1MKM873> to fill out a brief survey.

Eurofins EAG Materials Science LLC did not perform sampling for this project. Analysis was performed on samples and sample locations provided and specified by the client. This analysis report should not be reproduced, except in full, without the written approval of Eurofins EAG Materials Science, LLC. The results relate only to the items tested.

SCREENING FOR SEVEN SPECIFIED COMPOUNDS IN FERTILIZER-RELATED PRODUCTS ANALYTICAL RESULTS AND INTERPRETATIONS

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY WITH ULTRAVIOLET DETECTION (HPLC/UV)

Sample Analysis Performance Date: 21 September 2021

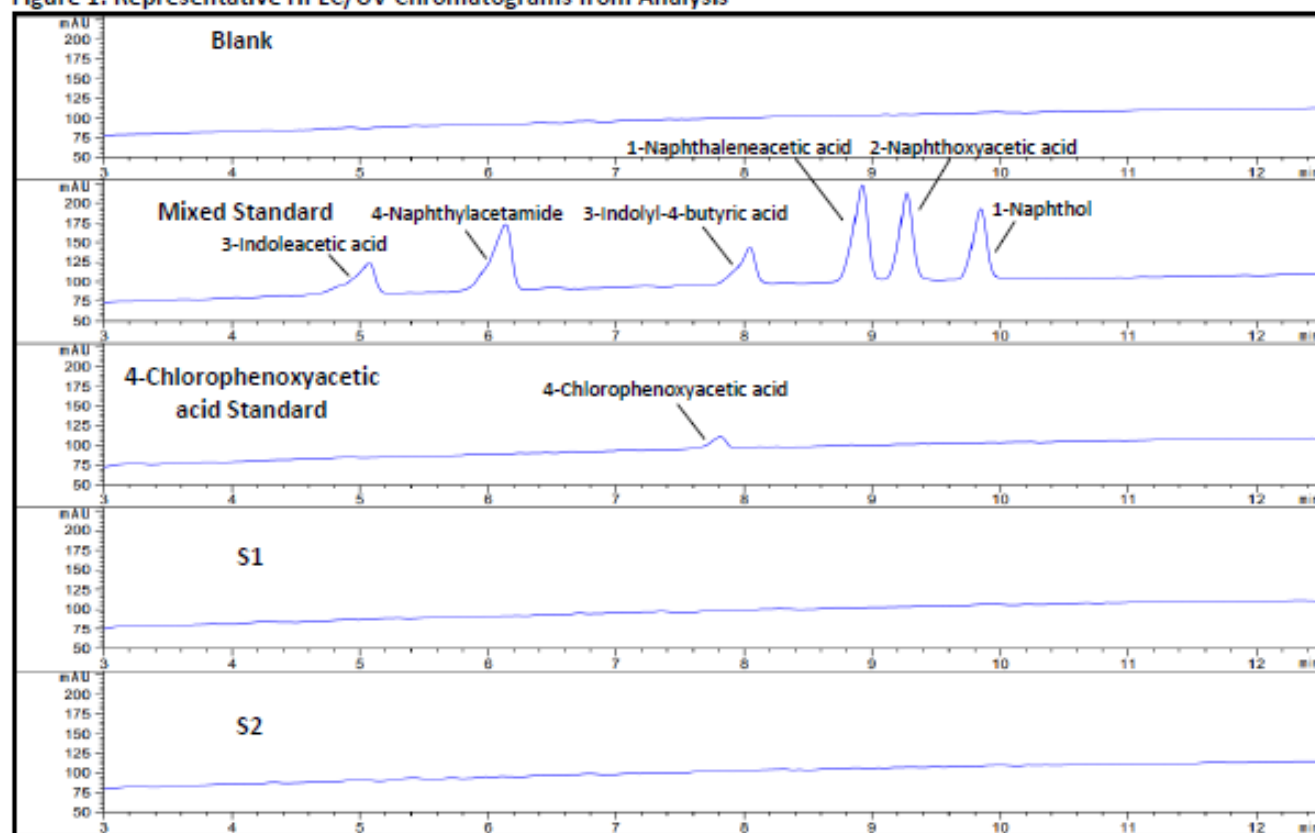
The submitted fertilizer-related samples were analyzed as-received (i.e. neat) by HPLC/UV to screen for seven specified compounds. Analytical reference standards of each of the seven specified compounds were analyzed alongside the samples. None of the seven specified compounds were detected in either of the samples. Since all seven compounds were non-detects, the concentrations of the standards analyzed were used as limits of detection (LODs). Table 1 summarizes the results from the analysis of S1 and S2. Representative Chromatograms from the analysis are given in Figure 1.

Table 1. Summary of HPLC/UV Analysis of S1 and S2

SAMPLE DESCRIPTION	COMPOUND NAME	CAS No.	AVG. CONCENTRATION ¹ (µg/g) ²
S1 (RootMAX)	1-Naphthol	90-15-3	< LOD ³ (5.1)
	3-Indoleacetic acid	87-51-4	< LOD ³ (4.9)
	3-Indolyl-4-butyric acid	133-32-4	< LOD ³ (5.0)
and	1-Naphthaleneacetic acid	86-87-3	< LOD ³ (5.0)
	4-Naphthylacetamide	86-86-2	< LOD ³ (4.7)
S2 (GroMAX)	2-Naphthoxyacetic acid	120-23-0	< LOD ³ (5.1)
	4-Chlorophenoxyacetic acid	122-88-3	< LOD ³ (5.0)

¹Average of duplicate injections; ²µg/g = parts per million; ³LOD = Limit of Detection

Figure 1. Representative HPLC/UV Chromatograms from Analysis



TECHNIQUE DESCRIPTION

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

HPLC is used for separation, identification, and quantitation of a variety of compounds in complex matrices. A mixture of solvents or solutions, called the mobile phase, is forced at high pressure through a packed column, usually of coated silica particles, called the stationary phase. Components are separated based on the difference in their affinities for the stationary phase and the mobile phase and are detected and measured as they elute from the column. The time a chemical component spends in the column from injection until detection is known as retention time and is an indicator of component identity. The measured peak area or height is concentration dependent and is used to quantitate the component. For quantitative analyses, the amounts listed in the tables above were referenced to a known amount of external standard and are quantitative. Calibration curves were prepared, and relative standard deviation and relative percent difference information are referenced in the report above. For semi-quantitative analysis, the amounts are referenced to a known amount of external standard and are semi-quantitative. No calibration curves were prepared, and no attempt was made to correct for response factor differences due to sample matrix differences. Typical reproducibility as determined by statistical process control of the measurement system is estimated at about 15% (at 95% confidence level, $k \sim 2$). This reproducibility is an estimate of the uncertainty of a single standard measurement over time, and the uncertainty in a specific measurement must be determined on a case-by-case basis.