

CERTIFICATE OF ANALYSIS

TOCOMIN® 50% (NON-GMO)

NATURAL FULL SPECTRUM TOCOTRIENOL/TOCOPHEROL COMPLEX 50% OIL SUSPENSION

Our Reference : BFAU-130207 / Schmidt-Philipp / 0007
COA No. : A1_500048_1/9
Sampling Date : 6th November 2012
Released Date : 11th November 2012
Manufacturing Date : 5th November 2012
Best Before Date : 4th November 2015
Batch No. : A1/50/0048_1_051112
Country of Origin : Malaysia
Plant Genus & Species : *Elaeis guineensis*
Plant Part Used : Palm Fruits

Analysis	Test Method	Principle of Method	Specification	Test Results
1 Physical Appearance			Reddish Oil Suspension	Complies
2 Tocotrienol/Tocopherol Complex, %	CTM_0001	HPLC	50.0 Min	51.2
<i>d</i> -Gamma-Tocotrienol, %			17.5 – 23.0	18.3
<i>d</i> -Beta Tocotrienol, %			2.0 Min	2.5
<i>d</i> -Delta Tocotrienol, %			7.0 – 10.0	7.1
<i>d</i> -Alpha Tocotrienol, %			12.0 – 15.0	12.2
<i>d</i> -Alpha Tocopherol, %			9.5 – 13.0	11.1
3 Moisture (WT, %)	AOCS 5 th Edition (2003) Ca 2e-84		1.00 Max	0.09
4 Peroxide Value, meq/kg	AOCS 5 th Edition Cd 8-53		10.0 Max	1.7
5 Plant Squalene, %	CTM_0007	GC	7.00 Min	7.2
6 Phytosterols Content, %	CTM_0008	GC	2.00 Min	3.5
7 Mixed Carotene, %	CIN_HPLC_Carotene_02	HPLC	0.03 Min	0.04
8 Lead (Pb), ppm	AOCS 5 th Edition Ca 15-75		3.0 Max	< 3.0
9 Heavy Metals (as Pb), ppm	Japanese Specification & Standards for Food Additives 7 th Edition – Heavy Metal Limit Test (HMLT)		10.0 Max	< 10.0
10 Total Viable Aerobic Count, cfu/g	BP 2009/Volume IV/Appendix XVI B		1000 Max	< 10
11 Total Combined Molds & Yeast Count, cfu/g	BP 2009/Volume IV/Appendix XVI B		100 Max	< 10

Certified By



Name : Ms. Chung Yoke Tying
Position : QC Section Head
IKM Registered Number : A/2586/5261/2008
Issued Date : 7th February 2013



This certificate shall not be reproduced except in full, without written approval of the Quality Control Department

Remarks:

- All samples tested as per received.
- CTM refers to the Carotech Validated In-House Method.

This Certificate of Analysis is not construed as a warranty. Customer is responsible to carry out their own analyses necessary to determine the suitability of the product described above for the intended use by the customer. It is the customer's responsibility to verify the batch number of the product received with the numbers contained on this report.