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E M A I L: i n f o @ n h r o r g a n i c o i l s . c o m W e b S i t e: www.nhrorganicoils.com

Certificate of Analysis & Gas Chromatography Organic Lantana Essential Oil (*Lantana camara*)

Batch Number : 151118-4
Country of Origin : Madagascar

Date de création : 26/04/2011
Date de révision : 14/05/2014
Version n° : 03.00

Botanical name:	<i>Lantana camara L.</i>
INCI :	LANTANA CAMARA FLOWER/LEAF/STEM EXTRACT
Certifications :	Organic food product from organic farming certified by FR-BIO-01
How to obtain:	Obtained by steam distillation of the flowering tops of the <i>Lantana camara L.</i>

CONSERVATION AND DDM

Minimum Durability Date: End 2019
Store in closed containers well, protected from light and at a stable, moderate temperature.
Handle in a well-ventilated room away from sources of ignition and heat.

ORGANOLEPTIC CHARACTERISTICS

Internal Method Analysis

Property	Result	Specification
Aspect :	Liquid	Clear moving liquid
Colour :	Yellow	Pale yellow to dark yellow
Odour :	Sweet, herby	Sweet, spicy

PHYSICAL CHARACTERISTICS

Analysis according to PE method in force.

Analysis	Result	Specification	Conditions of analysis
Density @ 20°C :	0,914	0,900 à 0,935	measured by an oscillating tube densimeter @ 20°C
Refractive index @ 20 °C :	1,485	1,477 à 1,495	measured @ 20 ° C under cold light
Rotating power @ 20 °C :	22,00°	5° à 35°	measured @ 20 ° C under a thickness of 1dm at the sodium wavelength D ($\lambda = 589.3\text{nm}$)

CHROMATOGRAPHIC PROFILE

Interpretation of the profile: In Appendix

Comments :	
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OBSERVATION

The validity and use of this Analysis Bulletin are reserved for this lot only, the results shown here correspond to those obtained at the time of the analysis.

INTERPRETATION OF THE CHROMATOGRAPHIC PROFILE

Composants	Résultats (%)	Spécifications (%)
α pinene + α thujene	6,42	
camphene	0,33	
β pinene	4,73	
sabinene	12,97	7,00 à 15,00
δ 3 carene	0,27	
myrcene	0,18	
α phellandrene	0,47	
α terpinene	0,19	
<i>limonene</i>	1,49	
β phellandrene	0,07	
cineol 1-8	4,81	
γ terpinene	0,79	
trans β ocimene	0,38	
para cymene	1,70	
terpinolene	0,16	
α copaene	2,03	
<i>linalol</i>	0,99	
β elemene	0,75	
terpinen 4 ol	13,04	
β caryophyllene		10,00 à 16,00
allo-aromadendrene	0,50	
α humulene	4,34	
γ muurolene	0,59	
α terpineol		
germacrene d	2,41	
bicyclogermacrene	4,39	
δ cadinene	0,10	
calamenene	0,75	
caryophyllene oxyde	1,18	
trans nerolidol	1,51	
davanone	18,14	15,00 à 22,00
viridiflorol	0,17	
spathulenol	1,58	
tau cadinol	0,15	

Conditions of chromatographic analysis

CG: performed on a 7890B device

by the Internal laboratory

Column : DB-WAX , 20 m, 100 μm, 0.2 μm

Oven temperature: 60°C (2 min) 12°C/mn 248°C (5 min)

Integration: percentage of area - threshold: 0,05 %

Analytical conditions according to standards ISO 7609 (1985), 11024-1 (1998) and 11024-2 (1998).

The compounds are identified from the comparison of the retention times with those of standards derived from computerized and personal databases.

The% are calculated from the peak areas given by the GC / FID.

Injection : split - 279ml/mn

Detector temperature: 275 °C

Detector type: Flame ionization

Injected volume: 0,2 μ

Vector gas: Hydrogen - 0,7 ml/mn