

Certificate of Analysis

Analysed essential oil : **Muhuhu**

Analysis date : May, 12th 2015

Batch : 131BB501

Shelf life : June 2018

❖ General description

Essential oil	Muhuhu	Origin	Africa
Latin name	Brachylaena hutchinsii Hutch.		

❖ Organoleptic characteristics

Appearance	Clear and mobile liquid
Colour	Yellow brown
Odour	Characteristic

❖ Physico-chemical characteristics

	Results (at 20°C)	Technical specifications				
Specific gravity	0.977	0.960	<	d	<	1.000
Refractive index	1.5113	1.5000	<	IR	<	1.5200
Optical rotation	ND	0°	<	$[\alpha]^{20}_d$	<	+5°

❖ Volatile elucidation

GC : Perkin Elmer – Clarus 500

Column : Elite - 1, 30 m, Ø 0.25 mm, 0.25 µm df

Injection : split

Detector : FID

Carrier gas : H₂

⇒ See Chromatogram : non-polar column

Date : 2015-05-12

Software Version : 6.2.0.0.0:B27
Sample Name : Muhuhu
Instrument Name : CLARUS 500
Rack/Vial : 0/9
Sample Amount : 1.000000
Cycle : 9

Date : 12/05/2015 16:13:13
Data Acquisition Time : 12/05/2015 06:35:38
Channel : A
Operator : Davenne
Dilution Factor : 1.000000

Result File :
Sequence File : C:\Sequences\CPG\2015\150511.seq

Rapport d'analyse

colonne apolaire

Pic #	Component Name	TR [min]	Area [%]
1		13.42	0.01
2		22.40	0.02
3		25.13	0.02
4		26.50	0.02
5		26.68	0.04
6		27.64	0.11
7		28.28	0.04
8		28.94	0.37
9	ylangene <alpha>	29.19	1.04
10	copaene <alpha>	29.37	0.82
11		29.61	0.01
12		29.79	0.03
13		29.91	0.15
14		30.15	0.03
15		30.27	0.04
16		30.37	0.05
17		30.53	0.02
18		30.64	0.05
19		30.76	0.08
20		31.01	0.19
21		31.20	0.13
22		31.48	0.06
23		31.63	0.01
24		31.89	0.03
25		32.06	0.01
26		32.16	0.04
27		32.33	0.12
28		32.44	0.01
29		32.56	0.06
30		32.66	0.12
31		32.80	0.02
32		32.91	0.03
33		33.05	0.07
34	cadina-1(6),4-diene <cis>	33.14	0.22
35		33.24	0.33
36	amorphene <alpha>	33.45	10.31
37		33.75	0.78
38	amorphene <gamma>	33.91	2.34
39	muurolene <alpha>	34.15	1.23
40	amorphene <delta>	34.43	0.99
41	cadinene <gamma>	34.64	0.65
42	calamenene <trans>	34.79	2.34
43	cadinene <delta>	35.04	2.67
44		35.17	0.09
45	cadina-1,4-diene <trans>	35.37	0.61
46	calacorene <alpha>	35.50	3.25
47		35.71	0.07
48		35.81	0.12
49		35.92	0.62
50		36.07	0.11
51	calacorene <beta>	36.18	0.34
52		36.31	0.45
53		36.45	0.21
54		36.68	0.30
55		36.81	0.08
56		36.91	0.22
57		36.99	0.13
58		37.08	0.20

12/05/2015 16:13:13 Result:

Pic #	Component Name	TR [min]	Area [%]
59		37.21	0.59
60	brachyl oxide	37.60	8.44
61		37.78	2.78
62		37.90	2.47
63		38.11	0.79
64		38.31	1.94
65		38.58	0.37
66		38.75	5.01
67		38.86	2.57
68		39.19	2.37
69		39.32	2.01
70	copaen-15-ol	39.57	12.64
71	copaen-15-al	39.70	7.45
72		39.88	0.54
73		40.01	0.55
74		40.10	0.64
75	cadalene	40.21	2.93
76		40.38	0.28
77		40.49	0.67
78	calamenen-10-one <10-nor>	40.75	1.31
79		40.90	0.16
80		41.07	0.24
81		41.24	0.35
82		41.35	0.23
83		41.49	0.23
84		41.77	0.13
85		41.85	0.09
86		41.93	0.11
87		42.19	0.37
88		42.38	0.09
89		42.54	0.03
90		42.72	0.32
91		42.94	0.30
92		43.31	1.11
93		43.50	0.23
94		43.77	0.56
95		43.85	0.18
96		43.95	0.36
97	brachylaenalone A	44.19	1.92
98		44.56	0.45
99	brachylaenalone B	44.78	1.53
100		44.92	0.14
101		45.08	0.42
102		45.21	0.04
103		45.34	0.28
104		45.47	0.03
105		45.57	0.15
106		45.82	0.01
107		46.01	0.03
108		46.17	0.02
109		46.46	0.11
110		46.81	0.28
111		46.94	0.06
112		47.09	0.04
113		47.41	0.03
114		47.51	0.03
115		47.74	0.24
116		48.39	0.06
117		48.56	0.10
118		49.04	0.02
119		49.44	0.03
120		50.11	0.03
121		50.91	0.01
122		51.31	0.01
123		61.42	0.00
124		79.48	0.00
			100.00

Chromatogram

Sample Name : Muhuhu Sample #: 131BB501 Page 1 of 1
FileName : C:\Data\Colonne Apolaire\Huiles Essentielles\Muhuhu\2015\muhuhu 150511.raw
Date : 12/05/2015 16:13:15 Time of Injection: 12/05/2015 06:35:38
Method : Muhuhu.mth Start Time : 0.00 min End Time : 82.00 min Low Point : -47.26 mV High Point : 993.88 mV
Plot Offset: -47.26 mV Plot Scale: 1041.1 mV

