



NHR ORGANIC OILS  
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*Certificate of Analysis & Gas Chromatography*  
**Organic Manuka Essential Oil**  
*(Leptospermum scoparium)*

<b>Trade Name:</b>	Organic Manuka essential oil
<b>Batch number:</b>	020823-2
<b>Plant / animal Latin name:</b>	Leptospermum scoparium
<b>Quality, certificate:</b>	EU organic
<b>Origin:</b>	New Zealand

Parameters	Specifications	Results
Odour & appearance	Characteristic, woody, pale clear yellow liquid	conform
Specific gravity	0.930 -0.980@ 20°C	0.9390
Refractive index	1.479 -1.506@ 20°C	1.5033
Optical rotation	NA	-
GC-FID	Conform to standard	conform

Index	Name	Time [Min]	Area [uV.Min]	Area % [%]	Allergen [max [%]]	Specification [%]
1	alpha-Pinene	7.65	779.5	1.044		
2	beta-Pinene	10.25	94.2	0.126		
3	Myrcene	12.53	251.3	0.337		
4	Limonene	14.10	63.8	0.085		
5	1,8 Cineole	14.50	108.2	0.145		
6	gamma-Terpinene	16.44	88.2	0.118		
7	p-Cymene	17.78	96.5	0.129		
8	Amyl isovalerate	19.25	89.9	0.120		
9	Prenyl isovalerate	23.52	133.7	0.179		
10	alpha-Cubebene	28.45	3014.8	4.037		
11		29.27	63.0	0.084		
12	Ylangene	29.79	151.4	0.203		
13	alpha-Copaene	30.35	4416.5	5.915		
14	alpha-Gurjunene	32.44	748.3	1.002		
15		33.04	118.3	0.158		
16	Calarene	35.94	189.9	0.254		
17	beta-Elemene	36.06	569.3	0.762		

18	beta-Caryophyllene	36.26	2057.2	2.755		
19	Aromadendrene	36.82	1612.3	2.159		
20	Cadina-3,5-diene	38.30	5211.5	6.979		
21	Allo-Aromadendrene	38.92	606.1	0.812		
22	Zonarene	39.87	2807.1	3.759		
23		40.05	108.4	0.145		
24	alpha-Humulene	40.28	270.6	0.362		
25	gamma-Selinene	40.71	458.7	0.614		
26	gamma-Muurolene	41.43	1105.6	1.481		
27	Ledene	41.78	565.1	0.757		
28		42.48	213.6	0.286		
29		42.72	913.5	1.223		
30	beta-Selinene	43.00	4202.4	5.628		
31	alpha-Selinene	43.31	3562.8	4.771		
32		43.43	656.3	0.879		
33		43.79	295.5	0.396		
34		45.09	2043.7	2.737		
35		45.23	5030.2	6.736		
36	Cadina-1,4-diene	46.50	4795.9	6.423		
37		46.99	110.0	0.147		
38		47.21	77.0	0.103		
39		48.85	86.9	0.116		
40	Calamene	49.21	11932.3	15.980		
41		52.35	182.7	0.245		
42	alpha-Calacorene	52.74	343.6	0.460		
43		53.19	127.2	0.170		
44	beta-Calacorene	53.34	549.0	0.735		
45		53.95	123.0	0.165		
46		56.41	410.2	0.549		
47		57.39	90.5	0.121		
48		58.75	219.7	0.294		
49		59.29	145.6	0.195		
50		59.86	83.5	0.112		
51	epi-Cubenol	60.20	904.4	1.211		
52	Cubenol	60.53	798.4	1.069		

53		61.02	254.0	0.340		
54		61.42	259.7	0.348		
55		62.89	265.9	0.356		
56	Flavesone	63.33	2493.0	3.339		
57	Isoleptospermone	64.75	1406.6	1.884		
58	Leptospermone	65.51	4783.1	6.405		
59		67.73	194.0	0.260		
60		68.00	238.4	0.319		
61		68.20	151.2	0.202		
62		69.03	261.2	0.350		
63		72.85	193.0	0.259		
64		73.25	153.9	0.206		
65		73.84	68.8	0.092		
66		73.99	194.5	0.260		
67		95.12	76.7	0.103		
Total			74671.6	100.000		