



NHR ORGANIC OILS
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Certificate of Analysis & Gas Chromatography
Organic Tagetes Essential Oil
(Tagetes minuta)

Trade Name:	Organic Tagetes essential oil
Batch number:	200824-1
Plant / Latin name:	Tagetes minuta var bipinata
Quality:	Organic certified
Origin:	Madagascar

Parameters	Specifications	Results
Odor and appearance	Orange to red liquid / fresh, fruity, green apple	conform
Specific gravity	0.858 – 0.890 at 20°C	0.8838
Refractive index	1.478 -1.510 at 20°C	1.4951
Optical rotation	NA	-
GC-FID	Conform to standard	conform

System: GC-430 FID

Column: BGB Wax 60m / 0.25mm / 0.25um

Method: 180306 essential basis 60min

Index	Name	Time [Min]	Area [uV.Min]	Area % [%]	Allergene
1	alpha-Pinene	6.98	50.0	0.092	
2	Ethyl 2-methylbutyrate	7.46	121.2	0.223	
3	Camphene	7.79	53.0	0.097	
4	beta-Pinene	8.60	36.0	0.066	
5	Isoamylacetate	8.79	29.7	0.055	
6	Sabinene	8.85	255.0	0.469	
7	Myrcene	9.69	105.1	0.193	

8	alpha- Phellandrene	9.80	140.9	0.259	
9	Limonene	10.55	2101.2	3.863	Directive 2003/15EC (7th)
10	Cis-beta-Ocimene	11.31	25916.8	47.645	
11	trans-beta- Ocimene	11.67	292.0	0.537	
12		12.56	39.7	0.073	
13	Dihydrotagetone	13.00	8962.3	16.476	
14		13.62	242.3	0.445	
15		14.06	108.7	0.200	
16		14.43	185.8	0.342	
17		15.48	110.5	0.203	
18		16.13	44.8	0.082	
19		16.26	57.5	0.106	
20		16.44	102.5	0.188	
21	trans-Tagetone	17.07	527.3	0.969	
22		17.15	36.0	0.066	
23	cis-Tagetone	17.50	5615.1	10.323	
24		17.83	45.8	0.084	
25	Linalool	17.98	98.8	0.182	Directive 2003/15EC (7th)
26		18.18	43.5	0.080	
27		18.93	168.7	0.310	
28		19.12	167.8	0.308	
29	Terpinene-4-ol	19.27	18.4	0.034	
30	beta- Caryophyllene	19.34	402.2	0.739	
31	alpha-Humulene	20.76	216.4	0.398	
32	cis-Tagetenone	21.07	2307.9	4.243	
33		21.19	115.1	0.212	
34	trans-Tagetenone	21.45	4510.4	8.292	
35		21.51	109.4	0.201	
36	Bicyclogermacrene	21.96	693.5	1.275	
37		23.91	164.2	0.302	
38		24.79	39.4	0.072	
39		25.12	27.6	0.051	
40		25.57	40.7	0.075	
41		27.28	44.7	0.082	
42		28.55	48.4	0.089	
Total			54395.9	100.000	