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Certificate of Analysis & Gas Chromatography

Turmeric Essential Oil

(Curcuma longa)

COMMON NAME	Turmeric
LATIN NAME	Curcuma longa
COUNTRY OF ORIGIN	Madagascar
CULTIVATION METHOD	Conventional
TYPE	Essential Oil
EXTRACTION METHOD	Steam Distilled
PLANT PART	Rhizomes
USE	Aromatherapy, Natural Perfumery, Cosmetics

LOT #	1
MANUFACTURING DATE	September 2025
BEST BY DATE	September 2028

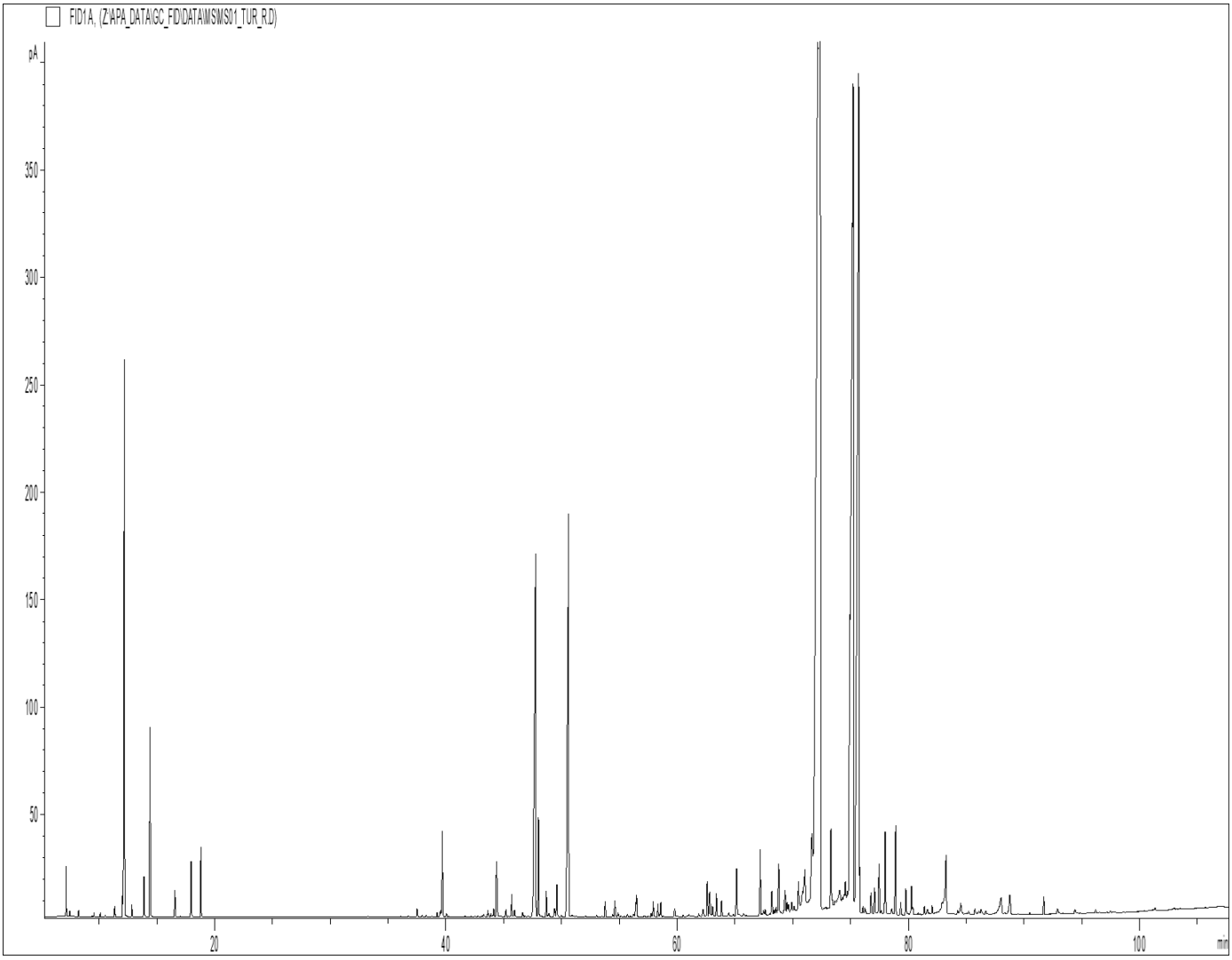
	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20˚C	0.914 – 0.945	0.933
REFRACTIVE INDEX @20˚C	1.4 – 1.6	1.5089
OPTICAL ROTATION @20˚C	-30^{o} to +45^{o}	+25.5°

PHYSICAL APPEARANCE	Transparent liquid	*Conforms*
COLOR	Yellow to orange	*Conforms*
ODOR	Warm, fresh, spicy, slightly wood aroma	*Conforms*
SOLUBILITY	Soluble in alcohol and fixed oils	
SPECIAL USE INSTRUCTIONS	Dilute before use	

PRIMARY CONSTITUENTS	Ar-Turmerone, Turmerone.

THIRD PARTY LAB ANALYSIS (GCMS)

CHROMATOGRAPHIC PROFILE:



- TURMERIC EO - LOT 1 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
1	7,16	alpha-PINENE	0,15		0,15
2	7,22	alpha-THUYENE	0,01		
3	7,47	TOLUENE	0,03		
4	8,24	CAMPHENE	0,02		
5	9,58	beta-PINENE	0,02		0,02
6	10,10	SABINENE	0,02		
7	11,34	delta3-CARENE	0,06		
8	12,01	beta-MYRCENE	0,11		
9	12,19	**alpha-PHELLANDRENE**	**3,63**		
10	12,82	alpha-TERPINENE	0,06		0,06
11	13,88	LIMONENE	0,23		0,23
12	14,41	1,8-CINEOLE	1,05		
13	16,54	gamma-TERPINENE	0,15		
14	17,95	p-CYMENE	0,32		
15	18,82	TERPINOLENE	0,39		0,39
16	36,76	LINALOOL	0,01		0,01
17	37,51	alpha-cis-BERGAMOTENE	0,06		
18	37,96	alpha-CEDRENE	0,01		
19	38,30	SESQUITERPENE	0,02		
20	39,25	alpha-trans-BERGAMOTENE	0,03		
21	39,54	SESQUITERPENE	0,05		
22	39,71	beta-CARYOPHYLLENE	0,59		0,59
23	40,06	TERPINENE-4-OL	0,03		
24	42,52	SESQUITERPENE Mw=202	0,01		
25	43,28	SESQUITERPENE Mw=202	0,02		
26	43,64	CURCUMENE ISOMER	0,05		
27	43,90	SESQUITERPENE	0,02		
28	44,15	alpha-HUMULENE	0,06		
29	44,39	SESQUITERPENE Mw=202	0,40		
30	44,40	E-beta-FARNESENE	0,12		
31	45,21	Z-beta-FARNESENE	0,05		
32	45,71	gamma-CURCUMENE	0,14		
33	45,95	TERPENYL ACETATE	0,05		
34	46,64	GERMACRENE D	0,04		
35	47,76	SESQUITERPENE Mw=202	0,10		
36	47,77	**alpha-ZINGIBERENE**	**4,23**		
37	48,02	beta-BISABOLENE	0,63		
38	48,17	SESQUITERPENE	0,02		
39	48,70	beta-CURCUMENE	0,16		
40	48,91	delta-CADINENE	0,04		

41	49,41	E,E-alpha-FARNESENE	0,08		
42	49,61	SESQUITERPENE	0,23		
43	50,00	COMPOUND Mw=220	0,01		
44	50,62	**beta SESQUIPHELLANDRENE**	**2,94**		
45	50,63	alpha-CURCUMENE	1,42		
46	50,94	COMPOUND Mw=220	0,02		
47	52,07	cis-SABINOL	0,01		
48	53,04	COMPOUND Mw=220	0,01		
49	53,78	SESQUITERPENE Mw=202	0,10		
50	54,43	SESQUITERPENE Mw=202	0,02		
51	54,62	COMPOUND Mw=220	0,10		
52	54,90	SESQUITERPENE Mw=202	0,03		
53	55,72	COMPOUND Mw=218	0,02		
54	56,26	COMPOUND Mw=218	0,02		
55	56,42	SESQUITERPENE Mw=202	0,08		
56	56,50	DEHYDROCURCUMENE	0,14		
57	57,76	COMPOUND Mw=220	0,03		
58	57,94	COMPOUND Mw=220	0,10		
59	58,35	COMPOUND Mw=220	0,08		
60	58,59	COMPOUND Mw=220	0,10		
61	59,80	COMPOUND Mw=220	0,07		
62	60,52	COMPOUND Mw=220	0,01		
63	61,04	ATLANTONE ISOMER	0,02		
64	61,88	COMPOUND Mw=220	0,02		
65	62,24	DEHYDRO HIMACHALENE ISOMER	0,08		
66	62,61	DEHYDRO TUMERONE ISOMER	0,24		
67	62,81	COMPOUND Mw=218	0,24		
68	63,07	COMPOUND Mw=218	0,08		
69	63,40	ATLANTONE ISOMER	0,05		
70	63,41	COMPOUND Mw=218	0,11		
71	63,86	SESQUITERPENIC COMPOUND	0,10		
72	64,47	COMPOUND Mw=220	0,04		
73	64,87	AROMATIC COMPOUND	0,02		
74	65,15	COMPOUND Mw=220	0,39		
75	65,76	NEROLIDOL	0,03		
76	65,99	COMPOUND Mw=218	0,01		
77	67,20	COMPOUND Mw=218	0,47		
78	67,47	COMPOUND Mw=220	0,03		
79	67,63	AROMATIC ESTER	0,03		
80	68,20	COMPOUND Mw=222	0,17		

81	68,40	ATLANTONE ISOMER	0,02		
82	68,55	AROMATIC COMPOUND	0,03		
83	68,79	beta-SESQUIPHELLANDROL	0,36		
84	69,34	SESQUITERPENIC COMPOUND	0,18		
85	69,52	SESQUITERPENIC COMPOUND	0,06		
86	69,64	SESQUITERPENIC COMPOUND	0,05		
87	69,92	COMPOUND Mw=218	0,07		
88	70,13	TERPENIC COMPOUND	0,04		
89	70,50	AROMATIC COMPOUND	0,22		
90	70,87	AROMATIC COMPOUND	0,14		
91	71,06	AROMATIC COMPOUND	0,42		
92	71,65	ATLANTONE ISOMER	0,73		
93	72,41	**alpha-TURMERONE**	**39,43**		
94	72,56	**beta-TURMERONE**	**18,06**		
95	73,30	AROMATIC COMPOUND	0,62		
96	73,65	TERPENIC COMPOUND	0,02		
97	74,01	AROMATIC COMPOUND	0,16		
98	74,53	AROMATIC COMPOUND	0,13		
99	75,70	**Ar-TURMERONE**	**12,51**		
100	75,77	COMPOUND Mw=220	0,19		
101	76,06	COMPOUND Mw=220	0,06		
102	76,24	COMPOUND Mw=232	0,05		
103	76,76	SESQUITERPENIC COMPOUND	0,15		
104	77,06	SESQUITERPENIC COMPOUND	0,20		
105	77,46	AROMATIC COMPOUND Mw=218	0,36		
106	77,65	SESQUITERPENIC COMPOUND	0,04		
107	77,98	COMPOUND Mw=220	0,63		
108	78,55	SESQUITERPENIC COMPOUND	0,09		
109	78,89	E-gamma-ATLANTONE	0,65		
110	79,33	AROMATIC COMPOUND	0,10		
111	79,78	AROMATIC COMPOUND	0,19		
112	80,26	AROMATIC COMPOUND	0,21		
113	80,38	COMPOUND Mw=220	0,06		
114	80,83	AROMATIC COMPOUND	0,02		
115	80,97	COMPOUND Mw=232	0,01		
116	81,38	SESQUITERPENIC COMPOUND	0,07		
117	81,64	COMPOUND Mw=232	0,06		
118	81,80	COMPOUND Mw=232	0,03		
119	82,04	COMPOUND Mw=232	0,08		
120	83,24	TERPENIC COMPOUND	1,07		

121	84,25	TERPENIC COMPOUND	0,04		
122	84,52	TERPENIC COMPOUND	0,15		
123	85,07	TERPENIC COMPOUND	0,02		
124	85,21	AROMATIC COMPOUND	0,03		
125	85,75	AROMATIC COMPOUND	0,05		
126	86,11	AROMATIC COMPOUND	0,05		
127	86,29	COMPOUND Mw=218	0,06		
128	86,67	AROMATIC COMPOUND	0,03		
129	88,01	AROMATIC COMPOUND	0,39		
130	88,32	AROMATIC COMPOUND	0,02		
131	88,77	AROMATIC COMPOUND	0,25		
132	90,48	COMPOUND Mw=218	0,01		
133	91,71	COMPOUND Mw=218	0,12		
134	92,88	COMPOUND Mw=234	0,09		
135	94,40	COMPOUND Mw=234	0,05		
136	96,19	AROMATIC COMPOUND	0,03		
137	101,34	AROMATIC COMPOUND	0,02		
138	102,98	AROMATIC COMPOUND	0,02		
139	103,47	PALMITIC ACID	0,03		
		TOTAL	**99,90**		**1,45**