



Chemical composition and antimicrobial properties of the rhizome essential oil of *Cyperus articulatus* L. grown in Karnataka, India

Ayusman Swain, Duraivadivel P, Gourav Choudhir and Hariprasad P*

Centre for Rural Development and Technology, Indian Institute of Technology Delhi, Hauz Khas 110016, New Delhi, India

Received 16 July 2021; Revised 17 January 2022

Supplementary Table 1

List of compounds identified in the GC-MS analysis of *Cyperus articulatus* L. rhizome essential oil (Data generated from NIST20 EI mass spectral library and FFNSC2 GC-MS library).

Peak Report TIC				
Peak#	R. Time	Area	Area %	Name
1	16.086	2944705	0.08	α -Campholenic aldehyde
2	16.682	35765130	0.96	Bicyclo[3.1.1]heptan-3-ol, 6,6-dimethyl-2-methylene
3	16.808	2830642	0.08	cis-Verbenol
4	16.993	25040391	0.67	trans-Verbenol
5	17.518	1707459	0.05	6,6-Dimethyl-2-methylenebicyclo[3.2.0]heptan-3-ol
6	17.770	6152601	0.16	Pinocarvone
7	18.886	3787928	0.10	(4-isopropylphenyl) methanol
8	19.112	3477560	0.09	1-Methyl-4-isopropyl-1-cyclohexene-8-ol
9	19.352	28284300	0.76	N-((Methylphenylamino) methyl) benzamide
10	19.415	28764299	0.77	Myrtenol
11	19.950	12606750	0.34	Bicyclo[3.1.1]hept-3-en-2-one, 4,6,6-trimethyl
12	20.422	4559559	0.12	trans-Carveol
13	24.031	2208809	0.06	Perilla alcohol
14	26.696	2838443	0.08	Aristol-1(10),8-diene
15	26.837	2161651	0.06	Cyclosativene
16	27.194	1748467	0.05	β -Vetivenene
17	27.407	174879704	4.67	Copaene
18	28.374	75872450	2.03	Cyperene
19	28.614	47914588	1.28	cis-Thujopsadiene
20	29.420	1869352	0.05	Dehydroaromadendrene
21	29.967	4734499	0.13	Azulene, 1,2,3,4,5,6,7,8-octahydro-1,4-dimethyl
22	30.818	47045095	1.26	Rotundene
23	30.979	6643862	0.18	Benzene, 1-methyl-4-(1,2,2-trimethylcyclopentyl
24	31.360	7987693	0.21	1-Methyl-4-methylene-2-(2-methyl-1-propenyl-1-vinylcycloheptane
25	31.563	31625550	0.85	γ -Murolene
26	32.307	9928066	0.27	Cubebol
27	32.477	35326225	0.94	Khusinol
28	32.741	9770059	0.26	Azulene, 1,2,3,5,6,7,8,8a-octahydro-1,4-dimethyl-7-(1-methylethenyl)
29	33.128	52345355	1.40	Khusinol
30	33.276	8567371	0.23	Gymnomitrol
31	33.463	30249417	0.81	trans-Calamenene
32	33.633	22141912	0.59	Spathulenol
33	33.808	3021530	0.08	4-epi-cubedol
34	34.011	4247077	0.11	11-Oxatetracyclo[5.3.2.0(2,7).0(2,8)]dodecan-9-one
35	34.239	61983440	1.66	β -Calacorene
36	34.470	1018715	0.03	O-Propyl N-isopropyl N-propyl phosphoramidocyanidate
37	34.599	26051414	0.70	Caryophyllene oxide

38	34.844	3226728	0.09	(-)-5-Oxatricyclo[8.2.0.0(4,6)]dodecane,,12-trimethyl-9-methylene
39	34.955	5971625	0.16	trans-Calamenene
40	35.266	34926288	0.93	Longifolenaldehyde
41	35.666	324817394	8.68	Cedroxyde
42	36.011	466295599	12.46	Longifolenaldehyde
43	36.142	68387179	1.83	β -copaen-4- α -ol
44	36.289	60494175	1.62	Nootkatol
45	36.504	10560109	0.28	3-Methyl-5-(2,6,6-trimethyl-1-cyclohexen-1-yl)-1-pentyn-3-ol
46	36.739	56067208	1.50	Longifolenaldehyde
47	36.926	74162541	1.98	Humulene epoxide II
48	37.139	28762289	0.77	α -Cedrenoxide
49	37.241	13029574	0.35	18-Oxokauran-17-yl acetate
50	37.346	5384491	0.14	9H-8-oxo-cycloisolongifolen
51	37.590	57953237	1.55	Viridiflorol
52	37.833	9972339	0.27	Longipinocarvone
53	38.110	23339533	0.62	Viridiflorol
54	38.560	51686178	1.38	1-methyl-8-(1-methylethyl)tricyclo[4.4.0.0(2,7)]dec-3-ene-3-methanol
55	38.690	64567210	1.73	Pogostol
56	38.881	75518566	2.02	Mustakone
57	39.390	59270713	1.58	α -Calacorene
58	39.738	658784720	17.60	Mustakone
59	39.965	9972293	0.27	14-hydroxy- α -Muurolene
60	40.123	52811523	1.41	2-methyl-4-(1,3,3-trimethyl-7-oxabicyclo[4.1.0]hept-2-yl)-3-butene-2-ol
61	40.249	97679183	2.61	Cyperotundone
62	40.413	67867366	1.81	Amorpha-4,9-dien-2-ol
63	40.746	101879430	2.72	6-Isopropenyl-4,8a-dimethyl-3,5,6,7,8,8a-hexahydro-1H-naphthalen-2-one
64	40.896	45712017	1.22	6-isopropyl-4,8a-dimethyl-3,5,6,7,8,8a-hexahydro-2(1H)-naphthalenone
65	41.013	21205931	0.57	13-hydroxyvalencene
66	41.179	22419603	0.60	Mustakone
67	41.365	28255380	0.76	cis-Sesquisabinene hydrate
68	41.550	14084728	0.38	β -Copaen-4- α -ol
69	41.696	24142812	0.65	Viridiflorol
70	41.995	42422143	1.13	9H-8-Oxo-cycloisolongifolene
71	42.128	11008760	0.29	2A,4,4,7-tetramethyl-2,2A,3,4,4A,5,7A,7B-octahydro-1H-cyclopenta(CD)indene
72	42.348	5101985	0.14	1H-cycloprop[e]azulene, decahydro-1,1,7-trimethyl-4-methylene
73	42.498	22042631	0.59	Longipinanol
74	42.801	22844369	0.61	α -Guaiene
75	43.032	18167131	0.49	Longipinanol
76	43.383	2390488	0.06	4-(2,6,6-trimethyl-2-cyclohexen-1-ylidene)-2-butanone
77	43.597	30825738	0.82	4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-butanone
78	44.002	16705599	0.45	1-(4-Isopropylphenyl)-2-methylpropylacetate
79	44.413	9713164	0.26	Valerenal
80	44.697	1703546	0.05	Nerolidol-epoxyacetate
81	44.830	8330216	0.22	Cyclopropanecarboxylic acid, 2-methyl-1-(phenylmethyl)-,2,6-bis(1,1-dimethylethyl)-4-methylphenyl ester
82	45.032	6204061	0.17	1-Methyl-3-(2,6,6-trimethyl-2-cyclohexen-1-yl)propyl acetate
83	45.457	1786218	0.05	3A,6,6,9A- tetramethyldecahydronaphtho[2,1,B]furan-2(1H)-one
84	45.584	8117186	0.22	1-Heptatriacotanol
85	46.054	14453522	0.39	Corymbolone
86	46.230	1184402	0.03	Khusimone
87	46.338	3357195	0.09	n-Heptadecanol-1
88	46.684	25671508	0.69	Corymbolone
89	49.157	19248323	0.51	n-Hexadecanoic acid
90	53.736	3687030	0.10	(RAC)-1,3,6,8-Tetramethylcyclododeca-1,2,6,7-tetraene
		3742275245	100.00	