

**Electronic supplementary material**

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**VOLATILE COMPONENTS OF *INULA HELENIUM* AND *I. GRANDIS*, GROWING  
IN UZBEKISTAN\***

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Table 1. Results of chromato-mass spectrometric analysis of volatile *Inula grandis* root compounds obtained by hydrodistillation (HD) and hexane extract (HE)

№	Components	HD		HE	
		RI	%	RI	%
1	2	3	4	5	6
1	Cyclopentanecarboxylic acid, 2-methyl-3-methylene-, methyl ester	1236	0.96		
2	Benzene, 1-(1,1-dimethylethyl)-3-ethyl-	1290	0.07		
3	2,6,6,8-Tetramethyltricyclo[6.3.0.0(1,5)]undecane	1297	0.12		
4	Drima-(8,12),(9,11)-diene	1433	0.51		
5	Alloisolongifolene	1448	0.15		
6	(+) -Longicyclene	1459	0.09		
7	6 <i>S</i> -2,3,8,8-Tetramethyltricyclo[5.2.2.0(1,6)]undec-2-ene	1482	0.42		
8	(2,6,6-Trimethylcyclohex-1-enylmethanesulfonyl)benzene	1486	0.41		
9	Berkheyaradulene	1494	0.17		
10	$\beta$ -Isocomene	1531	0.14		
11	<i>trans</i> - $\alpha$ -bergamotene	1534	0.08		
12	6-Methoxy-3-methylbenzofuran	1539	0.08		
13	<i>cis</i> - $\beta$ -Elemene	1550	1.53	1550	0.34
14	$\beta$ -Santalene	1590	0.42		
15	4,11-Selinadiene	1628	0.16		
16	$\alpha$ -Santalene	1643	0.28		
17	2,4,6-Octatriene, 3,4-dimethyl-	1649	0.08		
18	$\beta$ -Guaiene	1659	0.16		
19	Epi- $\beta$ -selinene	1665	0.48		
20	$\alpha$ -Selinene	1672	0.28		
21	$\beta$ -Bisabolene	1683	0.30		
22	$\gamma$ -Gurjunene	1711	0.65		
23	(-)-Selina-5,11-diene	1729	0.99		
24	Acremine E	1753	0.20		
25	Not identified	1790	0.50		
26	Thymol	1845	0.22		
27	Alloaromadendrene	1911	0.14		
28	Not identified	1918	0.09		
29	2-Isopropyl-5-methylphenyl 2-methylbutanoate	1930	0.17		
30	Cycloheptane, 4-methylene-1-methyl-2-(2-methyl-1-propen-1-yl)-1-vinyl-	1990	0.45		
31	Not identified	2034	0.11		
32	Isolongifolene, 4,5-dehydro-	2063	0.08		
33	6-methoxy-2-ethoxy-7-methyl-7H-purine	2072	0.06		
34	Seychellene	2077	0.06		
35	$\alpha$ -Longipinene	2083	0.11		
36	Longifolene-I2	2095	1.55	2096	0.28
37	Tetracyclo[5.2.1.0(2,6).0(3,5)]decane, 4,4-dimethyl-	2101	0.11		
38	Not identified	2106	0.09		
39	$\gamma$ -Cadinene	2133	0.12		
40	Widdrene	2139	0.13		
41	<i>cis</i> -Thujopsene	2153	0.12		
42	$\gamma$ -Bisabolene	2155	0.16		
43	3-(2',4'-Dimethylpenta-1',4'-dien-3'-ylidene)-6,6-dimethylcyclohex-1-ene	2168	0.15		
44	1,5-Dimethyl-8-(1'-methylethenyl)bicyclo[4.4.0]dec-4-en-3-one	2175	0.23		
45	(3 <i>E</i> ,5 <i>E</i> ,8 <i>Z</i> )-3,7,11-Trimethyl-1,3,5,8,10-dodecapentane	2292	0.10		
46	$\alpha$ -Santalol	2306	0.04		
47	7 $\beta$ -Ethyl-8 $\beta$ -hydroxy-2,6-dimethylbicyclo[4.4.0]dec-1-ene	2309	0.04		
48	$\gamma$ -Neoclovone	2330	0.13		
49	Silphiperfol-5,7(14)-diene	2340	0.05		
50	<i>mu</i> c- $\beta$ -Santalene	2374	0.17		
51	2-Allyl-4-methylphenol	2414	0.16		
52	Not identified	2452	0.99		
53	Not identified	2498	0.11		
54	11 $\alpha$ ,13-dihydroelemasteiractinolide	2528	1.06	2528	0.01
55	Not identified	2531	1.18		
56	Not identified	2535	1.11		
57	(+)-Leden	2582	7.91	2582	6.79

End of table 1

1	2	3	4	5	6
58	Igalan	2601	15.77	2601	17.16
59	11 $\alpha$ ,13-Dihydro-alantolactone	2619	3.33	2620	2.93
60	Eudesma-5,11(13)-dien-8,12-olide (alantolactone)	2668	35.63	2668	54.38
61	Not identified	2689	1.96	2690	0.86
62	6,12-epoxy-11 $\beta$ -eudesma-4,6-dien-3-one	2704	5.40	2704	6.85
63	Not identified	2715	0.13		
64	Khusenic acid (zizanoic acid)	2742	0.19	2742	0.29
65	4,15-dihydroisoalantolactone	2754	7.01	2753	2.26
66	Not identified	2769	3.66	2770	6.09
67	Isoalantolactone	2783	0.18	2784	0.22
68	Not identified	2829	0.12		
69	Melampolide			2831	0.68
70	Germaacrene A			2841	0.87
71	Not identified	2918	0.20		
Total			100		100

Table 2. The data of chromato-mass spectrometric analysis of *Inula grandis* leaf essential oil

№	Components	RT	RI	%
1	2	3	4	5
1	2-Hexenal ( <i>E</i> )	4.067	1189	0.52
2	Not identified	6.032	1237	3.06
3	1-Hexanol	6.899	1254	0.30
4	3-Hexen-1-ol, ( <i>Z</i> -)	7.575	1268	0.27
5	Not identified	9.480	1412	0.32
6	1,4-Hexadiene, 3-ethyl-	10.436	1446	0.33
7	Benzaldehyde	10.947	1464	1.19
8	Not identified	11.190	1473	0.24
9	Ethyl N-benzylcarbamate	11.297	1477	2.25
10	Cyclohexanone, 2-methyl-5-(1-methylethyl)-, <i>trans</i> -	12.098	1505	0.62
11	$\beta$ -Ocimene	12.217	1509	0.37
12	( <i>Z,E</i> ) and ( <i>E,E</i> )-3,5-Octadien-2-one	12.531	1520	0.52
13	Not identified	13.166	1542	0.85
14	1 <i>R</i> - $\alpha$ -Pinene	13.499	1554	0.46
15	$\beta$ -Cyclocitral	13.766	1563	0.30
16	Not identified	14.098	1575	0.31
17	<i>p</i> -Mentha-1,5,8-triene	15.440	1622	0.32
18	Not identified	15.612	1628	0.35
19	l-Berberone	15.885	1638	0.37
20	4-Terpinenyl ester of <i>n</i> -butanoic acid	16.104	1646	1.64
21	( <i>E</i> )-4-Oxohex-2-enal	17.107	1683	0.46
22	3-Methylacetophenone	17.719	1705	0.37
23	Not identified	17.885	1711	0.42
24	Not identified	18.247	1725	0.79
25	Not identified	18.378	1730	0.85
26	<i>m</i> -Mentha-3(8),6-diene	18.817	1747	0.27
27	Hexanoic acid	19.849	1786	1.38
28	Benzene, 1-methyl-4-(1-methylethenyl)- ( <i>p</i> -Cymenene)	19.927	1788	2.00
29	Not identified	20.324	1804	0.80
30	Benzeneethanol	21.179	1837	1.22
31	$\beta$ -Ionone	22.158	1875	1.34
32	3-Ethynyl-4-(trimethylsilyl)furan	22.366	1883	1.24
33	Not identified	22.556	1891	0.39
34	Aromadendrene	23.090	1911	3.63
35	1,8-dimethyl- $\delta$ (1(9))-2-octalone	23.262	1919	0.29
36	Not identified	23.393	1924	1.35
37	2-Cyclohexen-1-one, 3,5,5-trimethyl-2-(2-propenyl)-	24.111	1953	0.78
38	Octanoic acid	25.173	1996	0.79
39	(4-Methylphenylthio)acetone	27.043	2074	1.48
40	1,1,5-Trimethylindane	27.346	2087	2.45
41	Longifolene-I2	27.542	2095	0.56

End of table 2

1	2	3	4	5
42	Not identified	27.726	2103	2.35
43	Rulepidadiene B	28.420	2133	0.47
44	Eudesmane-4-en-3-one	29.387	2175	3.11
45	Decanoic acid	30.064	2205	0.88
46	Not identified	30.272	2215	0.91
47	Dihydroactinidioides	30.664	2232	3.10
48	Not identified	31.067	2250	0.34
49	Valencene	31.156	2254	1.24
50	$\beta$ -Selinene	31.993	2292	0.89
51	Benzofuran, 2,3-dihydro- (Coumaran)	32.153	2299	0.59
52	Benzoic acid	32.741	2327	0.57
53	<i>trans</i> -Caryophyllene	34.421	2406	0.28
54	Not identified	34.486	2409	0.38
55	Not identified	35.133	2441	0.36
56	Benzene, 1-(1,5-dimethyl-4-hexenyl)-4-methyl-	35.311	2450	0.41
57	Not identified	35.364	2453	0.34
58	Not identified	36.878	2531	0.30
59	Not identified	36.949	2531	1.21
60	$\gamma$ -Elemene	37.905	2580	2.58
61	Not identified	38.255	2597	5.69
62	Dibutyl phthalate	38.433	2607	0.47
63	Not identified	38.641	2618	2.43
64	Eudesma-5,11(13)-dien-8,12-olide (alantolactone)	39.483	2662	20.27
65	Not identified	39.994	2689	0.84
66	Not identified	40.249	2702	1.40
67	Valerolactone ( $6\beta,7\alpha,11\beta$ H-valero-3-en-6,12-olide)	40.973	2741	0.52
68	Not identified	41.157	2751	0.92
69	Isoalantolactone	41.472	2769	7.81
70	Palmitic acid	42.653	2830	0.84
71	Not identified	45.181	2943	1.08
Total				98.98

Table 3. The volatile compounds of essential oil (HD) and hexane extract (HE) of *Inula helenium* roots

№	Components	HD		HE	
		RI	%	RI	%
1	2	3	4	5	6
1	Not identified	1236	1.80	1238	0.20
2	$\delta$ -Selinene	1289	0.17		
3	2,6,6,8-Tetramethyltricyclo[6.3.0.0(1,5)]undecane	1297	0.26	1299	0.07
4	Not identified	1433	0.78		
5	Not identified			1434	0.19
6	Alloisolongifolene	1448	0.28		
7	Not identified	1459	0.16		
8	Not identified	1486	0.58	1487	0.11
9	Berkheyaradulene	1494	0.19		
10	$\alpha$ -Methylpropanoic acid			1517	0.11
11	$\beta$ -Isocomene	1531	0.22		
12	$\alpha$ -Santalene	1534	0.11		
13	Not identified	1539	0.11		
14	(-)- $\beta$ -Elemene	1550	1.64	1550	0.27
15	$\beta$ -Santalene	1591	0.60	1591	0.14
16	$\beta$ -Selinene	1627	0.17		
17	Not identified	1643	0.44	1643	0.09
18	1,5,5-Trimethyl-6-methylene-cyclohexene	1649	0.19		
19	(-)- $\alpha$ -Gurjunene	1658	0.20		
20	Drima-(8,12),(9,11)-diene	1668	0.92	1668	0.20
21	$\alpha$ -Selinene	1672	0.46	1673	0.09
22	$\beta$ -Bisabolene	1684	0.52	1684	0.12
23	$\gamma$ -Gurjunene	1712	2.15	1712	0.25
24	Viridiflorol	1731	3.39	1730	0.40

End of table 3

1	2	3	4	5	6
25	$\beta$ -Guaiene	1772	0.09		
26	Hexanoic acid	1776	0.12		
27	1,5-Cyclooctadiene, 3,4-dimethyl-	1791	3.41		
28	$\alpha$ -Guaiene	1806	0.13		
29	Thymol	1845	0.45	1845	0.06
30	Tetracyclo[6.3.1.0(2.6).1(6.10)]tridecane (1,2-trimethylene-adamantane)	1861	0.16		
31	(4a <i>S</i> ,5 <i>S</i> ,8 <i>aR</i> )-3,4,4a,5,6,7,8,8a-octahydro-5,8a-dimethylnaphthalene-2(1H)-one	1866	0.09		
32	Alloaromadendrene	1911	0.14		
33	1,8-Dimethyl- $\delta$ (1(9))-2-octalone	1918	0.44		
34	Not identified	1938	0.12		
35	3,3-dimethyl-6-(1'-methylvinyl)-4-cycloheptanone	1952	0.13		
36	Not identified	1973	0.41		
37	Coconut naphthalenone	1980	0.11		
38	2-(2,6,6-Trimethylcyclohex-1-enyl) cyclopropanecarboxylic acid, methyl ester	1990	0.39	2001	0.09
39	(-)-Sinularene	2020	0.07		
40	1,1,4a-Trimethyl-5,6-dimethylenedecahydronaphthalene	2034	0.11		
41	Not identified	2047	0.20		
42	Cycloheptane, 4-methylene-1-methyl-2-(2-methyl-1-propen-1-yl)-1-vinyl-	2077	0.07		
43	$\gamma$ -Curcumene	2083	0.11		
44	Not identified	2095	1.84	2096	0.37
45	Isosativene	2101	0.18		
46	Bicyclo[3.1.1]hept-2-ene, 2,6-dimethyl-6-(4-methyl-3-pentenyl)- ( $\alpha$ -bergamotene)	2107	0.14		
47	Valencene	2133	0.20		
48	1-Vinyl-2,6,6-trimethylcyclohex-1-ene	2139	0.16		
49	$\alpha$ -Cedrene	2153	0.30	2154	0.06
50	Widdrene	2155	0.33	2156	0.06
51	Eremophila-1(10),11-diene	2175	0.26		
52	<i>cis</i> - $\alpha$ -Santalol	2306	0.09		
53	<i>Z</i> - $\alpha$ -Bergamotol	2314	0.13		
54	Not identified	2330	0.17		
55	$\beta$ -Santalol	2373	0.25	2374	0.11
56	Vulgaron B	2414	0.21	2416	0.32
57	Not identified	2434	0.07		
58	Tricyclo[7.2.0.0(2,6)]undecan-5-ol, 2,6,10,10-tetramethyl- (isomer 2)	2453	1.48	2455	2.35
59	11 <i>α</i> ,13-dihydroelemen-8 <i>β</i> ,12-olide	2498	0.28	2499	0.19
60	Not identified			2516	0.10
61	11 <i>α</i> ,13-dihydroelemasteiractinolide	2529	2.85	2530	1.69
62	Not identified	2532	2.87	2533	1.28
63	Not identified	2535	1.75	2538	2.22
64	Not identified	2584	13.17	2586	13.70
65	Not identified	2605	29.05	2608	29.53
66	11 <i>α</i> ,13-Dihydro-alantolactone	2621	2.86	2623	1.88
67	6-N-Butyl-1,2,3,4-tetrahydronaphthalene	2654	0.08		
68	Eudesma-5,11(13)-dien-8,12-olide (alantolactone)	2664	10.92	2668	14.66
69	Not identified	2689	2.37		
70	( <i>S</i> <sup>*</sup> )-1-[(1 <i>S</i> <sup>*</sup> ,2 <i>S</i> <sup>*</sup> )-2-Ethenyl-1-methyl-2-(phenylthio)cyclopropyl]ethanol			2696	14.77
71	Alloalantolactone	2702	1.92	2705	3.21
72	Valerolactone (6 <i>β</i> ,7 <i>α</i> ,11 <i>β</i> H-valero-3-en-6,12-olide)	2715	0.13		
73	Khusenic acid	2741	0.11	2743	0.23
74	2-Methylthio-3,4-dihydronaphtho[2,1- <i>c</i> ]thiophene	2752	2.13		
75	1-Methyl-3,3-bis(trifluoromethyl)cyclohexene			2755	3.08
76	Not identified	2768	1.39		
77	Phosphonic acid, [1-(1,1-dimethylethyl)-4,4-dimethyl-1,2-pentadienyl]-			2772	5.31
78	3-Chloro-2-ethyl-5-(styryl)furan			2784	0.10
79	Not identified			2789	0.09
80	Palmitinic acid			2831	0.44
81	Germacrene A	2839	0.18	2842	1.13
82	Not identified			2854	0.12
83	Not identified			3153	0.45
84	9,12-Octadecadienoic acid ( <i>Z,Z</i> )- (Linoleic acid)			3209	0.16

Total	100	99.45
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Table 4. The volatile components of essential oil of the leaves *Inula helenium*

№	Components	RT	RI	%
1	2	3	4	5
1	3-Hexanol	3.676	1164	0.62
2	1,8-Cineole	3.978	1183	0.17
3	2-Hexenal ( <i>E</i> )	4.073	1189	1.81
4	Furan, 2-pentyl-	4.329	1202	0.32
5	β-Ocimene	4.465	1205	0.18
6	Bicyclo[3.1.0]hexane, 6-methylene-	4.750	1210	0.20
7	Octanal	5.522	1226	0.16
8	<i>cis</i> -2-(2-Pentenyl)furan	5.688	1229	0.22
9	Cyclohexanone, 2,2,6-trimethyl-	6.038	1237	0.17
10	6-Methyl-5-hepten-2-one (sulcaton)	6.519	1247	0.26
11	1-Hexanol	6.899	1254	0.31
12	3-Hexen-1-ol, ( <i>Z</i> )-	7.575	1268	0.93
13	Nonanal	8.050	1278	0.83
14	Not identified	9.172	1401	0.36
15	Not identified	9.486	1412	0.16
16	1,4-Pentadiene	9.926	1428	0.15
17	1,4-Hexadiene, 3-ethyl-	10.436	1446	0.66
18	Camphor	10.828	1460	0.16
19	Decanal	10.905	1463	0.25
20	Benzaldehyde	10.952	1465	0.48
21	3,5-octadiene-2-one	11.190	1473	0.50
22	<i>trans</i> -2,3-dimethylbicyclo[2.2.2]octane	11.261	1475	0.41
23	9-Oxabicyclo[6.1.0]nonane	11.760	1493	0.20
24	Tetrahydrocarvone	12.116	1506	0.41
25	δ-3-Carene	12.240	1510	7.70
26	3,5-Octadien-2-one, ( <i>E,E</i> )	12.537	1520	0.58
27	Not identified	12.911	1533	0.18
28	Not identified	13.000	1536	0.21
29	Not identified	13.172	1542	1.05
30	2-Nonadecanol	13.564	1556	0.26
31	β-Cyclocitral	13.772	1563	0.61
32	1-Cyclohexene-1-carboxaldehyde, 4-(1-methylethyl)- (Phellandral)	13.843	1566	0.18
33	Safranal	14.377	1584	0.29
34	Not identified	15.238	1615	0.23
35	1,2-epoxy-menth-4-ene	15.612	1628	0.51
36	Not identified	16.116	1647	2.59
37	Not identified	16.360	1656	0.09
38	( <i>E</i> )-4-Oxohex-2-enal	17.119	1683	0.38
39	<i>m</i> -Mentha-3(8),6-diene	18.823	1747	0.54
40	β-Damascenone	19.137	1759	1.46
41	2-Carene	19.446	1770	1.65
42	Hexanoic acid	19.861	1786	1.63
43	Not identified	20.105	1795	5.25
44	Not identified	20.182	1798	0.33
45	5,9-Undecadien-2-one, 6,10-dimethyl-, ( <i>Z</i> )- (Farnesylacetone B)	20.336	1804	1.97
46	1-Cyclohexene-4-carboxaldehyde, 1-methyl-	21.019	1831	0.31
47	<i>cis</i> -Carane	21.648	1855	0.28
48	β-Ionone	22.170	1876	3.90
49	2H-Inden-2-one, 1,4,5,6,7,7a-hexahydro-7a-methyl-, ( <i>S</i> )-	22.277	1880	0.29
50	Not identified	22.568	1891	0.41
51	Not identified	22.710	1897	0.32
52	Alloaromadendrene	23.096	1912	0.42
53	Not identified	23.399	1924	1.76
54	Bicyclo[4.1.0]heptane, 7-(1-methylethylidene)-	23.535	1930	0.32
55	Not identified	23.636	1934	0.75
56	Not identified	23.737	1938	0.26
57	1,1,4,6-Tetramethylindane	24.343	1962	1.00
58	1,1,5,6-Tetramethylindane	24.509	1969	0.18

59	<i>trans</i> -Methylisoeugenol	24.586	1972	0.44
60	Not identified	24.817	1981	0.28

End of table 4

1	2	3	4	5
61	Octanoic acid	25.185	1996	1.02
62	1-Cyclohexene-1-carboxaldehyde, 4-(1-methylethyl)-	25.577	2013	0.14
63	Not identified	26.135	2036	0.26
64	1- <i>epi</i> -9-Norpresilphiperfolan-9-one	26.883	2068	0.38
65	3,7-Benzofurandiol, 2,3-dihydro-2,2-dimethyl-	27.037	2074	2.78
66	<i>cis</i> -Isoeugenol	27.269	2084	2.07
67	Hexahydrofarnesyl acetone	27.417	2090	1.74
68	Longifolene-I2	27.548	2095	0.46
69	Not identified	27.737	2104	2.55
70	2,2-Dimethylbicyclo[5.4.0]undeca-5,11-dien-10-one	28.076	2118	0.34
71	2- <i>sec</i> -Butyl-4-methoxybenzene-1,3-dicarbaldehyde	28.473	2136	0.62
72	Not identified	28.948	2156	0.28
73	Not identified	29.043	2161	0.50
74	1H-Pyrrole-2,5-dione, 3-ethyl-4-methyl-	29.393	2176	0.28
75	Decanoic acid	30.070	2205	0.47
76	[4a <i>R</i> ,8a <i>R</i> ]-1,2,3,4,4a,5,8,8a-octahydro-1,1,4a,6-tetramethyl-5-methylene-naphthalene	30.183	2211	0.60
77	Dihydroactinidiolide	30.675	2233	2.83
78	Caryophyllene oxide	31.999	2292	0.30
79	Not identified	32.159	2299	0.66
80	Not identified	32.409	2311	0.51
81	1-Deoxycapsidiol (=3-hydroxy-5- <i>epi</i> -aristolochene)	33.251	2351	0.43
82	Not identified	34.593	2414	0.60
83	Not identified	35.370	2452	0.34
84	Pentacosane	36.154	2491	0.72
85	1-Octadecene	37.026	2535	0.93
86	Phytene	37.554	2562	2.62
87	Dibutyl phthalate	38.433	2607	0.20
88	Tetradecanoic acid	38.747	2623	0.73
89	Not identified	40.006	2689	2.60
90	Not identified	41.478	2769	0.30
91	1,4-Methanoazulene, decahydro-4,8,8-trimethyl-9-methylene-, [1 <i>S</i> -(1 $\alpha$ ,3 $\alpha\beta$ ,4 $\alpha$ ,8 $\alpha\beta$ )]	41.887	2791	0.14
92	Palmitic acid	42.706	2832	7.36
93	( <i>E</i> )-15-Heptadecenal	45.211	2944	0.39
94	Benzene, 1,3-bis(1,1-dimethylethyl)-2-methoxy-5-methyl-	46.974	3018	6.61
95	Not identified	47.235	3032	4.16
96	Not identified	47.751	3060	1.71
97	Not identified	47.941	3070	0.49
98	Linoleic acid	50.499	3208	1.03
99	Linolenic acid	53.230	3355	1.35
Total				100

Table 5. Results of *in vitro* screening for antimicrobial activity of extracts from *Inula grandis* (IG) and *Inula helenium* (IH) (antibacterial and antifungal activity tests)

№	Sample	Inhibition zone diameter (mm)				
		Gram-positive bacteria		Gram-negative bacteria		Opportunistic fungus
		<i>Bacillus subtilis</i>	<i>Staphylococcus aureus</i>	<i>Escherichia coli</i>	<i>Pseudomonas aeruginosa</i>	<i>Candida albicans</i>
1	Essential oil of roots IG	11.08±0.12	11.04±0.10	n/a	n/a	6.04±0.10
2	Leaf essential oil IG	9.08±0.12	9.04±0.10	10.12±0.13	8.08±0.12	8.04±0.10
3	Extract IG (roots, hexane)	10.08±0.12	9.04±0.10	n/a	n/a	n/a
4	Essential oil of roots IH	9.08±0.12	8.04±0.10	n/a	n/a	7.04±0.10
5	Leaf essential oil IH	10.08±0.12	8–9	n/a	n/a	10.04±0.10
6	Extract IH (roots, hexane)	9.08±0.12	9.04±0.10	10.12±0.13	10.08±0.12	6.04±0.10
7	Ampicillin (0.010 mg/disk)	27.08±0.12	28.04±0.10			
8	Ceftriaxone (0.030 mg/disk)			28.12±0.13	26.08±0.12	
9	Fluconazole (0.025)					30.04±0.10

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mg/disk					
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Note: n/a – no inhibition; ≤6–8 mm – weak effect; 9–14 mm – visible effect; 15–20 mm – pronounced effect; ≤20 mm – strong effect