

Supplementary Material

In order to identify structural features that could influence the antioxidant properties of the spirocompounds reviewed, table 1 was built, recording the number of some groups important for antioxidant activity. Each compound was classified according to its antioxidant power, in relation to the positive controls used on each assay, as similar, higher and minor. However, for some compounds the information is not available (N.I), due to positive controls are not informed.

Table 1s. Structural features for spirocompounds reviewed.

Entry	Compound	Antioxidant activity/capacity (relation with positive control)	Spirocompound classification	Number of oxygen atoms	Number of nitrogen atoms	Number of halogen atoms	Number of OH groups	Number of Ar-OH groups
1	A1	Similar	[2.4.0]	3	1	1	0	0
2	A2	Similar	[2.4.0]	3	1	2	0	0
3	A3	Similar	[2.4.0]	3	1	2	0	0
4	A4	Minor	[2.4.0]	3	4	2	0	0
5	B1	Higher	[2.7.0]	7	0	0	1	1
6	C1	Minor	[4.4.0]	4	0	0	3	1
7	C2	Minor	[4.4.0]	4	0	0	2	1
8	C3	Higher	[4.4.0]	10	0	0	6	6
9	C4	Higher	[4.4.0]	10	0	0	6	6
10	C5	Higher	[4.4.0]	15	0	0	8	8
11	C6	Higher	[4.4.0]	15	0	0	8	8
12	C7	Higher	[4.4.0]	15	0	0	8	8
13	C8	Higher	[4.4.0]	15	0	0	8	8
14	C9	Higher	[4.4.0]	15	0	0	8	8
15	C10	Minor	[4.4.0]	3	1	0	2	1
16	C11	Higher	[4.4.0]	4	2	0	0	0
17	C12	Higher	[4.4.0]	5	2	0	2	2
18	C13	Higher	[4.4.0]	5	2	0	2	2
19	C14	Higher	[4.4.0]	1	4	1	0	0
20	C15	Higher	[4.4.0]	2	4	1	0	0
21	C16	Higher	[4.4.0]	1	4	1	0	0
22	C17	Higher	[4.4.0]	2	4	1	0	0
23	C18	Higher	[4.4.0]	3	3	0	0	0
24	C19	Higher	[4.4.0]	4	4	0	0	0
25	C20	Similar	[4.4.0]	4	3	0	0	0
26	C21	Similar	[4.4.0]	3	3	0	0	0
27	C22	Higher	[4.4.0]	1	2	0	0	0
28	C23	Higher	[4.4.0]	1	2	0	0	0
29	C24	Similar	[4.4.0]	1	2	1	0	0
30	C25	Similar	[4.4.0]	1	2	1	0	0

31	C26	Similar	[4.4.0]	1	2	1	0	0
32	C27	Higher	[4.4.0]	3	2	1	0	0
33	C28	Higher	[4.4.0]	4	3	0	0	0
34	C29	Higher	[4.4.0]	1	4	5	0	0
35	C30	Higher	[4.4.0]	2	4	5	0	0
36	C31	Minor	[4.4.0]	1	4	0	0	0
37	C32	Minor	[4.4.0]	5	3	0	0	0
38	C33	Higher	[4.4.0]	7	2	0	0	0
39	C34	Minor	[4.4.0]	4	6	0	0	1
940	C35	Minor	[4.4.0]	4	2	0	0	0
41	C36	Minor	[4.4.0]	3	2	1	0	0
42	C37	Higher	[4.4.0]	1	6	0	0	0
43	D1	Higher	[4.5.0]	6	0	0	4	4
44	D2	Minor	[4.5.0]	5	1	0	2	0
45	D3	Minor	[4.5.0]	6	1	0	3	0
46	D4	N.I	[4.5.0]	8	0	0	5	2
47	D5	Higher	[4.5.0]	6	0	0	4	3
48	D6	N.i.	[4.5.0]	3	1	0	1	0
49	D7	Minor	[4.5.0]	8	4	4	2	2
50	D8	Minor	[4.5.0]	8	4	4	2	2
51	D9	Minor	[4.5.0]	8	4	4	2	2
52	D10	Minor	[4.5.0]	8	4	4	2	2
53	D11	Similar	[4.5.0]	3	3	2	0	0
54	D12	Minor	[4.5.0]	4	3	0	0	0
55	D13	Minor	[4.5.0]	3	3	2	0	0
56	D14	Minor	[4.5.0]	4	4	0	0	0
57	D15	Minor	[4.5.0]	4	4	0	0	0
58	D16	Minor	[4.5.0]	3	5	0	0	0
59	D17	Minor	[4.5.0]	3	5	0	0	0
60	D18	N.i.	[4.5.0]	2	4	2	0	0
61	D19	Minor	[4.5.0]	1	4	0	0	0
62	D20	Minor	[4.5.0]	2	4	0	0	0
63	D21	Minor	[4.5.0]	3	5	1	0	0
64	D22	Minor	[4.5.0]	3	3	0	0	0
65	D23	Minor	[4.5.0]	4	3	1	0	0
66	D24	Minor	[4.5.0]	6	3	2	0	0
67	D25	Minor	[4.5.0]	6	7	2	0	0
68	D26	Higher	[4.5.0]	8	3	0	0	0
69	D27	Minor	[4.5.0]	3	3	0	0	0
70	D28	Minor	[4.5.0]	3	3	0	0	0
71	D29	Minor	[4.5.0]	9	3	0	1	0

72	D30	Minor	[4.5.0]	3	4	0	0	0
73	D31	Similar	[4.5.0]	3	1	0	0	0
74	D32	Minor	[4.5.0]	2	5	0	0	0
75	D33	Similar	[4.5.0]	2	3	0	0	0
76	D34	Similar	[4.5.0]	1	6	0	0	0
77	D35	Minor	[4.5.0]	4	2	0	0	0
78	D36	Minor	[4.5.0]	4	3	0	0	0
79	D37	Higher	[4.5.0]	4	3	0	0	0
80	D38	Similar	[4.5.0]	1	1	0	1	1
81	D39	Similar	[4.5.0]	0	1	0	0	0
82	D40	Minor	[4.5.0]	0	1	1	0	0
83	D41	Similar	[4.5.0]	0	1	1	0	0
84	D42	Minor	[4.5.0]	2	5	0	0	0
85	D43	Minor	[4.5.0]	2	3	0	0	0
86	D44	Minor	[4.5.0]	2	4	0	0	0
87	D45	Higher	[4.5.0]	6	0	0	3	1
88	D46	Similar	[4.5.0]	1	4	1	0	0
89	D47	Similar	[4.5.0]	4	3	0	0	0
90	D48	Minor	[4.5.0]	6	0	0	2	1
91	D49	Minor	[4.5.0]	0	3	0	0	0
92	D50	N.I.	[4.5.0]	6	0	0	0	0
93	D51	Higher	[4.5.0]	4	0	0	0	0
94	E1	Higher	[4.6.0]	1	1	0	0	0
95	E2	Minor	[4.6.0]	2	2	0	0	0
96	E3	Minor	[4.6.0]	2	2	1	0	0
97	E4	Minor	[4.6.0]	2	2	1	0	0
98	E5	Minor	[4.6.0]	3	2	0	1	1
99	E6	Minor	[4.6.0]	4	3	0	0	0
100	F1	Minor	[4.7.0]	2	3	0	0	0
101	F2	Minor	[4.7.0]	2	3	1	0	0
102	F3	Minor	[4.7.0]	2	3	1	0	0
103	F4	Minor	[4.7.0]	2	3	0	0	0
104	F5	Minor	[4.7.0]	2	3	1	0	0
105	G1	Higher	[5.5.0]	5	0	0	1	0
106	G2	Higher	[5.5.0]	8	0	0	2	0
107	G3	Minor	[5.5.0]	5	1	0	2	0
108	G4	Minor	[5.5.0]	5	1	0	2	0
109	G5	Minor	[5.5.0]	4	0	0	3	1
110	G6	Higher	[5.5.0]	3	0	0	0	0
111	G7	Higher	[5.5.0]	3	1	0	1	1
112	G8	Similar	[5.5.0]	2	5	0	0	0

113	G9	Higher	[5.5.0]	4	0	1	0	0
114	G10	Higher	[5.5.0]	4	0	1	0	0
115	G11	Higher	[5.5.0]	4	0	1	0	0
116	G12	Higher	[5.5.0]	5	0	0	0	0
117	G13	Higher	[5.5.0]	5	1	0	1	1
118	G14	Minor	[5.5.0]	2	5	0	0	0
119	H1	Minor	[5.6.0]	5	0	0	2	0