

Supplementary Materials

A Review of Halogenated Compounds from Marine Fungi

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Table S1. Chemical Formula of Halogenated compounds isolated from marine fungi (1994–2019)

The number of the compounds	The name of the compounds	Chemical Formula	The number of the compounds	The name of the compounds	Chemical Formula
1	Penicilazaphilone D	C ₁₄ H ₁₅ ClO ₅	110	Cochliomycin C	C ₁₉ H ₂₅ ClO ₇
2	Penicilazaphilone E	C ₁₉ H ₂₅ ClO ₆	111	Chondrosterin H	C ₁₀ H ₉ ClO ₂
3	Methyl 3-chloro-2-(2,4-dimethoxy-6-methylphenoxy)-6-hydroxy-4-methoxybenzoate	C ₁₉ H ₂₁ ClO ₆	113	(±)-pestalachloride D	C ₂₁ H ₂₀ Cl ₂ O ₅
4	Bromophilone A	C ₃₃ H ₃₅ BrO ₁₃	113	Guisinol	C ₂₃ H ₂₅ ClO ₅
5	Bromophilone B	C ₃₃ H ₃₅ BrO ₁₃	114	Viresenoside Z ₅	C ₂₆ H ₃₉ ClO ₉
6	Chrodrimanin K	C ₂₅ H ₃₁ ClO ₆	115	Viresenoside Z ₇	C ₂₆ H ₄₁ ClO ₁₀
7	Chrodrimanin L	C ₂₅ H ₃₀ Cl ₂ O ₆	116	Pericosine A	C ₈ H ₁₁ ClO ₅
8	Chrodrimanin O	C ₂₅ H ₂₉ Cl ₃ O ₆	117	Pericosine D	C ₈ H ₁₁ ClO ₅
9	4,6,4',6'-tetrabromo-3,3'-dihydroxy-5,5'-dimethyldiphenyl ether	C ₁₄ H ₁₀ Br ₄ O ₃	118	Pericosine E	C ₁₆ H ₂₁ ClO ₁₀
10	4,6,2',4',6'-pentabromo-3,3'-dihydroxy-5,5'-dimethyldiphenyl ether	C ₁₄ H ₉ Br ₅ O ₃	119	Chaetomugilin C	C ₂₃ H ₂₅ ClO ₆
11	Penicisulfuranol A	C ₂₁ H ₂₁ ClN ₂ O ₈ S ₂	120	Chaetomugilin D	C ₂₃ H ₂₇ ClO ₆
12	Penicisulfuranol D	C ₂₃ H ₂₇ ClN ₂ O ₈ S ₂	121	Chaetomugilin E	C ₂₄ H ₂₉ ClO ₆
13	4-Chloro-1-hydroxy-3-	C ₁₇ H ₁₃ ClO ₆	122	Chaetomugilin F	C ₂₃ H ₂₅ ClO ₅

	methoxy-6-methyl-8-methoxycarbonyl-xanthen-9-one				
14	2'-acetoxy-7-chlorocitreorosein	C ₁₈ H ₁₃ ClO ₇	123	Chaetomugilin G	C ₂₄ H ₂₉ ClO ₇
15	Dimeric terrestrol B	C ₁₄ H ₁₃ ClO ₅	124	Chaetomugilin H	C ₂₄ H ₂₉ ClO ₆
16	Dimeric terrestrol D	C ₁₄ H ₁₃ ClO ₅	125	Chaetomugilin I	C ₂₂ H ₂₇ ClO ₅
17	Dimeric terrestrol F	C ₁₄ H ₁₃ ClO ₅	126	Chaetomugilin J	C ₂₂ H ₂₇ ClO ₄
18	Dimeric terrestrol G	C ₁₄ H ₁₃ ClO ₅	127	Chaetomugilin K	C ₂₃ H ₂₉ ClO ₄
19	Not named	C ₈ H ₉ ClO ₃	128	Chaetomugilin L	C ₂₃ H ₂₉ ClO ₅
20	Chloctanspirone A	C ₂₁ H ₂₃ ClO ₇	129	Chaetomugilin M	C ₂₄ H ₂₉ ClO ₆
21	Chloctanspirone B	C ₂₁ H ₂₃ ClO ₇	130	Chaetomugilin N	C ₂₃ H ₂₅ ClO ₆
22	Chloctanspirone K	C ₇ H ₉ ClO ₃	131	Chaetomugilin O	C ₂₃ H ₂₅ ClO ₅
23	Chloctanspirone L	C ₇ H ₉ ClO ₃	132	<i>Seco</i> -chaetomugilin A	C ₂₄ H ₃₁ ClO ₈
24	1-chloro-3β-acetoxy-7-hydroxy-trinoreremophil-1,6,9-trien-8-one	C ₁₄ H ₁₅ ClO ₄	133	<i>Seco</i> -chaetomugilin D	C ₂₄ H ₃₁ ClO ₇
25	Not named	C ₁₅ H ₁₉ ClO ₄	134	11- <i>epi</i> -chaetomugilin A	C ₂₃ H ₂₇ ClO ₇
26	1α-chloro-2β-hydroxyeremophil-7(11),9-dien-8-one	C ₁₅ H ₂₁ ClO ₂	135	4'- <i>epi</i> -chaetomugilin A	C ₂₃ H ₂₇ ClO ₇
27	Not named	C ₁₈ H ₂₅ ClO ₆	136	Chaeto-mugilins P	C ₂₂ H ₂₇ ClO ₅
28	Tanzawaic acid P	C ₁₈ H ₂₇ ClO ₄	137	Chaeto-mugilins Q	C ₂₂ H ₂₉ ClO ₆
29	Emodacidamide C	C ₂₀ H ₁₆ ClNO ₈	138	Chaeto-mugilins R	C ₁₆ H ₂₁ ClO ₅
30	Emodacidamide F	C ₂₁ H ₁₈ ClNO ₈	139	11- <i>epi</i> -chaetomugilin I	C ₂₂ H ₂₇ ClO ₅
31	Emodacidamide G	C ₂₁ H ₁₈ ClNO ₈	140	Chaetomugilin S	C ₂₃ H ₂₇ ClO ₆
32	Penicilone C	C ₂₉ H ₃₅ ClO ₇	141	(-)-Spiromalbramide	C ₂₁ H ₂₃ Cl ₂ N ₃ O ₂
33	Penicilone D	C ₂₉ H ₃₃ ClO ₆	142	(+)-Isomalbrancheamide B	C ₂₁ H ₂₄ ClN ₃ O
34	Penicilone G	C ₂₉ H ₃₅ BrO ₇	143	(+)-Malbrancheamide C	C ₂₁ H ₂₄ BrN ₃ O
35	Penicilone H	C ₂₉ H ₃₃ BrO ₆	144	Isomalbrancheamide B	C ₂₁ H ₂₄ BrN ₃ O
36	Ligerin	C ₂₀ H ₃₁ ClO ₇	145	5-bromozeaenol	C ₁₉ H ₂₃ BrO ₇
37	Penicillimide	C ₁₃ H ₁₄ ClNO ₅	146	3,5-dibromozeaenol	C ₁₉ H ₂₂ Br ₂ O ₇
38	Penicilazaphilone C	C ₂₀ H ₂₉ ClO ₇	147	Trichodermamide B	C ₂₀ H ₁₉ ClN ₂ O ₈
39	Chlorocarolide A	C ₉ H ₁₃ ClO ₄	148	Roussoellatide	C ₁₉ H ₂₂ Cl ₂ O ₆
40	Chlorocarolide B	C ₉ H ₁₃ ClO ₄	149	6-chloro-2-(2-hydroxypropan-2-yl)-2,3-dihydro-5-hydroxybenzofuran	C ₁₁ H ₁₃ ClO ₃
41	8-chloro-9-hydroxy-8,9-deoxyasperlactone	C ₉ H ₁₃ ClO ₄	150	7-chloro-2-(2-hydroxypropan-2-yl)-2,3-dihydro-5-hydroxybenzofuran	C ₁₁ H ₁₃ ClO ₃
42	9-chloro-8-hydroxy-8,9-deoxyasperlactone	C ₉ H ₁₃ ClO ₄	151	Pestalone	C ₂₁ H ₂₀ Cl ₂ O ₆

43	9-chloro-8-hydroxy-8,9-deoxyaspyrone	C ₉ H ₁₃ ClO ₄	152	Methyl 2,4-dibromo-5-oxo-2-decenoate	C ₁₁ H ₁₆ Br ₂ O ₃
44	Aspergillusidone B	C ₂₀ H ₁₈ Cl ₂ O ₅	153	Methyl 2,4-dibromo-5-oxo-3-decenoate	C ₁₁ H ₁₆ Br ₂ O ₃
45	Aspergillusidone C	C ₁₉ H ₁₆ Cl ₂ O ₅	154	[β-MePro] destruxin E	C ₃₀ H ₅₀ ClN ₅ O ₈
46	Aspergillusether A	C ₂₁ H ₂₁ Cl ₃ O ₆	155	Bromomyrothenone B	C ₇ H ₈ BrNO ₂
47	Aspergone O	C ₁₀ H ₁₅ ClO ₄	156	Acremonisol A	C ₁₂ H ₁₅ ClO ₄
48	Ochrasperfloroid	C ₄₈ H ₅₈ ClNO ₁₄	157	Chaetoxanthone C	C ₂₀ H ₁₉ ClO ₆
49	Notoamide N	C ₂₆ H ₂₈ ClN ₃ O ₄	158	91	C ₁₀ H ₁₃ ClO ₄
50	Notoamide P	C ₂₆ H ₃₀ BrN ₃ O ₅	159	Bromomethylchlamydosporol A	C ₁₂ H ₁₅ BrO ₅
51	Ochratoxin A <i>n</i> -butyl ester	C ₂₄ H ₂₆ ClNO ₆	160	Bromomethylchlamydosporol B	C ₁₂ H ₁₄ Br ₂ O ₅
52	Asperindole A	C ₂₉ H ₃₂ ClNO ₆	161	Bromochlorogentisylquinone A	C ₇ H ₄ BrClO ₃
53	Asperindole C	C ₃₃ H ₃₈ ClNO ₈	162	Bromochlorogentisylquinone B	C ₇ H ₄ BrClO ₃
54	Sydowin A	C ₁₈ H ₁₄ Cl ₂ O ₇	163	Chlorotrithiobrevamide	C ₂₁ H ₂₃ ClN ₂ O ₈ S ₃
55	Sydowin B	C ₁₈ H ₁₄ Cl ₂ O ₆	164	3-hydroxytrichodenone C	C ₇ H ₉ ClO ₃
56	Dehydroxychlorofusarin B	C ₂₅ H ₃₉ ClO ₄	165	7-chloro-2',5,6-trimethoxy-6'-methylspiro(benzofuran-2(3H),1'-(2)cyclohexene)3,4'-dione	C ₁₇ H ₁₇ ClO ₆
57	(R)-(-)-5-bromomellein	C ₁₀ H ₉ BrO ₃	166	Emeriphenolicin A	C ₂₅ H ₃₆ ClNO ₅
58	19-hydroxypenitrem A	C ₃₇ H ₄₄ ClNO ₇	167	Emeriphenolicin B	C ₂₅ H ₃₆ ClNO ₅
59	Allianthrone A	C ₃₆ H ₃₂ Cl ₂ O ₁₀	168	Pestalotether A	C ₁₈ H ₁₇ ClO ₈
60	Allianthrone B	C ₃₆ H ₃₂ Cl ₂ O ₁₀	169	Pestalotether B	C ₁₆ H ₁₅ ClO ₆
61	Allianthrone C	C ₃₆ H ₃₂ Cl ₂ O ₁₀	170	Pestalotether C	C ₁₈ H ₁₇ ClO ₈
62	(1'S)-7-Chloroaverantin	C ₂₀ H ₁₉ ClO ₇	171	Pestalochromone A	C ₁₂ H ₁₇ ClO ₅
63	(1'S)-6-O-methyl-7-chloroaverantin	C ₂₁ H ₂₁ ClO ₇	172	Pestalochromone B	C ₁₂ H ₁₇ ClO ₅
64	(1'S)-1'-O-methyl-7-chloroaverantin	C ₂₁ H ₂₁ ClO ₇	173	Pestalochromone C	C ₁₁ H ₁₁ ClO ₃
65	(1'S)-6,1'-O,O-dimethyl-7-chloroaverantin	C ₂₂ H ₂₃ ClO ₇	174	Pestalotiopene C	C ₂₇ H ₃₃ ClO ₁₀
66	(1'S)-7-chloroaverantin-1'-butyl ether	C ₂₄ H ₂₇ ClO ₇	175	Paradictyoarthrin A	C ₁₆ H ₁₉ ClO ₈
67	7-chloroaverythrin	C ₂₀ H ₁₇ ClO ₆	176	Chloropreussomerin A	C ₂₁ H ₁₅ ClO ₈
68	6-O-methyl-7-chloroaverythrin	C ₂₁ H ₁₉ ClO ₆	177	Chloropreussomerin B	C ₂₂ H ₁₇ ClO ₈
69	(1'S)-6,1'-O,O-	C ₂₂ H ₂₃ BrO ₇	178	Rhizovarin A	C ₃₆ H ₄₂ ClNO ₈

	dimethyl-7-bromoaverantin				
70	(1'S)-6-O-methyl-7-bromoaverantin	C ₂₁ H ₂₁ BrO ₇	179	Rhizovarin B	C ₃₇ H ₄₄ ClNO ₈
71	5-chlorosclerotiamide	C ₂₆ H ₂₈ ClN ₃ O ₅	180	Rhinomilisin A	C ₃₀ H ₄₁ ClO ₁₀
72	5'-Hydroxychlorflavonin	C ₁₈ H ₁₅ ClO ₈	181	Rhinomilisin B	C ₁₅ H ₂₃ ClO ₆
73	7-chlorofolipastatin	C ₂₃ H ₂₃ ClO ₅	182	Rhinomilisin B	C ₁₆ H ₂₅ ClO ₆
74	Chloriolin A	C ₁₄ H ₂₁ ClO ₃	183	Rhinomilisin I	C ₁₅ H ₂₁ ClO ₅
75	Chloriolin B	C ₂₂ H ₃₃ ClO ₇	184	Polyporapyranone D	C ₁₁ H ₇ ClO ₃
76	Chloriolin C	C ₂₂ H ₃₃ ClO ₆	185	Chlorogentisylquinone	C ₇ H ₅ ClO ₃
77	Trichodenone B	C ₇ H ₉ ClO ₃	186	Spiromastixone B	C ₁₉ H ₁₉ ClO ₅
78	Trichodenone C	C ₇ H ₉ ClO ₂	187	Spiromastixone C	C ₁₉ H ₁₉ ClO ₅
79	Gymnastatin A	C ₂₃ H ₃₁ Cl ₂ NO ₄	188	Spiromastixone D	C ₁₉ H ₁₈ Cl ₂ O ₅
80	Gymnastatin B	C ₂₄ H ₃₅ Cl ₂ NO ₅	189	Spiromastixone E	C ₁₉ H ₁₈ Cl ₂ O ₅
81	Gymnastatin C	C ₂₄ H ₃₇ Cl ₂ NO ₆	190	Spiromastixone F	C ₁₉ H ₁₇ Cl ₃ O ₅
82	Gymnastatin D	C ₂₂ H ₃₂ ClNO ₅	191	Spiromastixone G	C ₂₀ H ₁₉ Cl ₃ O ₅
83	Gymnastatin E	C ₂₃ H ₃₄ ClNO ₅	192	Spiromastixone H	C ₁₉ H ₁₇ Cl ₃ O ₅
84	Gymnastatin F	C ₂₅ H ₃₉ Cl ₂ NO ₅	193	Spiromastixone I	C ₁₉ H ₁₆ Cl ₄ O ₅
85	Gymnastatin G	C ₂₄ H ₃₈ ClNO ₆	194	Spiromastixone J	C ₂₀ H ₁₈ Cl ₄ O ₅
86	Gymnastatin I	C ₂₃ H ₃₁ Br ₂ NO ₄	195	Spiromastixone K	C ₂₀ H ₁₉ Cl ₃ O ₅
87	Gymnastatin J	C ₂₄ H ₃₅ Br ₂ NO ₅	196	Spiromastixone L	C ₂₀ H ₁₈ Cl ₄ O ₅
88	Gymnastatin K	C ₂₄ H ₃₇ Br ₂ NO ₆	197	Spiromastixone M	C ₁₉ H ₁₇ Cl ₃ O ₄
89	Gymnastatin Q	C ₂₄ H ₃₅ Cl ₂ NO ₅	198	Spiromastixone N	C ₁₉ H ₁₇ Cl ₃ O ₅
90	Gymnastatin R	C ₂₂ H ₃₁ Cl ₂ NO ₄	199	Spiromastixone O	C ₁₉ H ₁₆ Cl ₄ O ₅
91	Dankastatin A	C ₂₄ H ₃₅ Cl ₂ NO ₅	200	Emerixanthone A	C ₂₆ H ₂₉ ClO ₅
92	Dankastatin B	C ₂₃ H ₃₃ Cl ₂ NO ₄	201	Cladosporol G	C ₂₀ H ₁₇ ClO ₆
93	Dankastatin C	C ₂₅ H ₃₉ Cl ₂ NO ₆	202	Pestalone B	C ₂₁ H ₂₃ BrO ₆
94	Chlorohydroaspyrone A	C ₉ H ₁₃ ClO ₄	203	Pestalone C	C ₂₀ H ₂₁ BrO ₆
95	Chlorohydroaspyrone B	C ₉ H ₁₃ ClO ₄	204	Pestalone D	C ₂₁ H ₂₂ Br ₂ O ₆
96	Chlorocylindrocarpol	C ₂₃ H ₃₃ ClO ₅	205	Pestalone E	C ₂₀ H ₂₁ ClO ₆
97	Acremofuranone A	C ₂₂ H ₂₇ ClO ₅	206	Pestalone F	C ₂₁ H ₂₃ ClO ₆
98	Acremofuranone B	C ₂₃ H ₂₇ ClO ₄	207	Pestalone G	C ₂₁ H ₂₂ BrClO ₆
99	5-Chloroacremine A	C ₁₂ H ₁₇ ClO ₄	208	Pestalone H	C ₂₁ H ₂₂ BrClO ₆

100	5-Chloroacremine H	C ₁₂ H ₁₇ ClO ₅	209	N-glutarylchaetoviridin A	C ₃₁ H ₃₈ ClNO ₉
101	Acremine O	C ₁₂ H ₁₅ ClO ₄	210	N-glutarylchaetoviridin B	C ₂₈ H ₃₀ ClNO ₈
102	Helicusin E	C ₂₅ H ₂₉ ClO ₉	211	N-glutarylchaetoviridin C	C ₃₀ H ₃₄ ClNO ₈
103	Isochromophilone X	C ₂₇ H ₃₂ ClNO ₇	212	Neomangicol A	C ₂₅ H ₃₇ ClO ₅
104	Isochromophilone XI	C ₂₅ H ₂₉ ClO ₈	213	Neomangicol B	C ₂₅ H ₃₇ BrO ₅
105	Minioluteumide A	C ₂₂ H ₃₂ ClNO ₅	214	Chaephilone C	C ₂₃ H ₂₇ ClO ₇
106	Stachybogrisephenone B	C ₁₆ H ₁₅ ClO ₆	215	Chaetoviridide A	C ₃₀ H ₃₁ ClN ₂ O ₇
107	(3 <i>R</i> ,4 <i>S</i>)-4-hydroxy-6-methoxy-7-chloromellein	C ₁₁ H ₁₁ ClO ₅	216	Chaetoviridide B	C ₂₇ H ₃₄ ClNO ₇
108	Spiroxin A	C ₁₉ H ₉ ClO ₈	217	Chaetoviridide C	C ₂₅ H ₃₀ ClNO ₆
109	Spiroxin E	C ₂₀ H ₁₀ Cl ₂ O ₈			