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No.	WS Phytochemicals	Type of Extract	Analytical methods	References
1.	(20S,22R)-3a,6a-Epoxy-4b,5b,27-trihydroxy-1-oxowitha-24-enolide	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
2.	(20S,22R)-4b,5b,6a,27-Tetrahydroxy-1-oxowitha-2,24-dienolide	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
3.	1,4-Dioxo-3b,25,26-trihydroxy ergosta-24(28)-ene	n-hexane extract	HR-FAB-MS, H NMR, C NMR, HMBC, H-H COSY	[2]
4.	12-deoxywithastramonolide	Methanol extract, hydroalcoholic extract	HPTLC, LS-ESI-MS-MS, HPLC-UV-EIMS, GC-MS	[1,3–7]
5.	14-Hydroxy-27-deoxywithaferin A	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
6.	14 α ,17 α -dihydroxywithanolide R	Petroleum ether: acetone extract	UV, IR, C NMR, DEPT, HRFABMS, FABMS, EIMS	[8]
7.	16b-Acetoxy-6,7a-epoxy-5a-hydroxy-1-oxowitha-2,17(20),24-trienolide	Hydroalcoholic extract, Methanol extract	GC-MS, LC-MS, HPLC, FAB-HR-MS, HMBC, HMQC, C NMR, H NMR, H-H COSY, NOESY, DEPT	[1,9]
8.	17-hydroxy 27-deoxy withaferin A	Methanol: water	HPLC	[10]
9.	17-hydroxywithaferin A	Methanol: water, Methanol extract, hydroalcoholic extract	HPLC, GC-MS, LC-MS	[1]
10.	2-deoxywithastramonolide	Ethanol: water	HPLC-ESI-MS, C-UV(DAD)-MS	[11]
11.	2,5-Dioxo-3-tetratriacont-30-enyl1,4-dioxane	n-hexane extract	HR-FAB-MS, H NMR, C NMR, HMBC, H-H COSY	[2]
12.	20-Deoxywithanolide A	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
13.	23, 24 Dihydrowithaferin A	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
14.	23, 24-dihydrowithagenin	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
15.	27-deoxywithaferin A	Methanol: water, methanol extract, hydroalcoholic extract	HPLC, GC-MS, LC-MS	[1,10]
16.	27-hydroxywithanolide B	Methanol extract, hydroalcoholic extract	HPLC, C NMR, H NMR, MS, GC-MS	[1,13]

No.	WS Phytochemicals	Type of Extract	Analytical methods	References
17.	27-hydroxywithanolide D	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
18.	27-hydroxywithanone	Ethanol: water, aqueous ethanol extract, methanol: water, hydroalcoholic extract	HPLC, GC-MS, LC-MS	[1,10,14,15]
19.	27-O-b-D-glucosyl sominone 3-O-diglucoside	Methanol extract	HPLC, GC, NMR, ESI-MS	
20.	4-deoxywithaperuvin	Petroleum ether: acetone extract	UV, IR, C NMR, DEPT, HRFABMS, FABMS, EIMS	[8]
21.	5,7a-epoxy6a,20a-dihydroxy-1-oxowitha-2,24- dienolide	Methanol extract, Hydroalcoholic extract	HPLC, FAB-HR-MS, HMBC, HMQC, C NMR, H NMR, H-H COSY, NOESY, DEPT, GC-MS, LC-MS	[1,9]
22.	5a,20aF(R)-dihydroxy-6a,7a-epoxy-1-oxowitha-2,24-dienolide	Methanol extract	HPLC, H NMR, C NMR	[16]
23.	Aesculetin	Petroleum ether: acetone extract	UV, IR, C NMR, DEPT, HRFABMS, FABMS, EIMS	[8]
24.	Ashwagandhanolide	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
25.	Coagulin Q	Methanol extract	HPLC, H NMR, C NMR, HPLC, ESI-MS	[1,12,16]
26.	Daturamalakoside B	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
27.	Delphinidin diglucoside	Chloroform extract	HPLC, NMR	[17]
28.	Imperatorin	Chloroform extract	HPLC, NMR	[17]
29.	Iochromolide	Water extract	MEEKC-UV, CEC-UV, CEC-MS	[18]
30.	Kaempferol	Methanol extract	HPLC	[19]
31.	Malic acid	Methanol extract	HR-MAS-NMR, 2D COSY, HSQC, GC-MS	[5,20]
32.	Malvidin diglucoside	Chloroform extract	HPLC, NMR	[17]
33.	Octacosane	n-hexane extract	HR-FAB-MS, H NMR, C NMR,	[2]

No.	WS Phytochemicals	Type of Extract	Analytical methods	References
			HMBC, H-H COSY	
34.	Petunidin diglucoside	Chloroform extract	HPLC, NMR	[17]
35.	Physagulin D	Methanol extract, Ethanol: water, aqueous ethanol extract	HPLC, H NMR, C NMR, GC, UPLC, ESI-MS	[1,12,14–16,21]
36.	Scopoletin	Petroleum ether: acetone extract	UV, IR, C NMR, DEPT, HRFABMS, FABMS, EIMS	[12,21]
37.	Sitoindoside IX	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
38.	Sitoindoside VII	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
39.	Sitoindoside VIII	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
40.	Sitoindoside X	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
41.	Sominone Triglucoside	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
42.	tetraglucoside	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
43.	Vicosalactone B	Methanol extract, Hydroalcoholic extract	HPLC, GC, NMR, ESI-MS, GC-MS, LC- MS	[1,12]
44.	Withacnistin	Water extract	MEEKC-UV, CEC- UV, CEC-MS	[18]
45.	Withacoagin	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
46.	Withaferin A	Methanol extract, Ethanol: water, Methanol: water, chloroform extract, hydroalcoholic extract	HPLC, H NMR, C NMR, LC-MS, HPLC, ESI-MS, MEEKC-UV, CEC- UV, CEC-MS, HPTLC, HR-MAS, HMBC, LC-ESI-MS- MS, HPLC-UV- EIMS, RP-HPLC	[1,3,15–18,21–26,4– 7,10,12–14]
47.	Withagenin A Diglucoside	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
48.	Withanamide	Methanol extract	GC-MS, NMR	[20]
49.	Withananine	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]

No.	WS Phytochemicals	Type of Extract	Analytical methods	References
50.	Withanine	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
51.	Withanolide A	Ethanol: water, aqueous ethanol extract, methanol extract, hydroalcoholic extract	HPLC-ESI-MS, C-UV(DAD)-MS, FAB-HR-MS, C NMR, H NMR, HMBC, HMQC, LC-ESI-MS-MS, HPLC-UV-EIMS, RP-HPLC	[1,3,15,21,24,25,47,9,11,13,14]
52.	Withanolide B	Methanol extract, hydroalcoholic extract	HPLC, C NMR, H NMR, MS, GC-MS	[1,13]
53.	Withanolide D	Methanol extract, Methanol: water extract	HPLC, LC-MS	[1,4,10,22]
54.	Withanolide sulfoxide	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
55.	Withanolide Z	Methanol extract	HPLC, C NMR, H NMR, MS	[13]
56.	Withanone	Ethanol: water, aqueous ethanol extract, methanol: water	HPLC-ESI-MS, C-UV(DAD)-MS, HR-MAS NMR, HMBC, RP-HPLC	[1,5,10,11,14,15,21,24,25]
57.	Withanoside I	Methanol extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY, HPLC, ESI-MS	[12,16]
58.	Withanoside II	Methanol extract, hydroalcoholic extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY, HPLC	[1,12,16]
59.	Withanoside III	Methanol extract, hydroalcoholic extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY, HPLC, ESI-MS	[1,12,16]
60.	Withanoside IV	Methanol extract, Ethanol: water, hydroalcoholic extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY, HPLC	[1,4,12,14,16]
61.	Withanoside V	Methanol extract, hydroalcoholic extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY, HPLC, ESI-MS	[1,4,16]
62.	Withanoside VI	Methanol extract	FAB-MS, GLC, C NMR, H NMR, HMBC, NOESY	[1,16]

No.	WS Phytochemicals	Type of Extract	Analytical methods	References
63.	Withanoside VII	Methanol extract	FAB-MS, GLC, C	[16]
			NMR, H NMR, HMBC, NOESY	
64.	Withanoside VIII	Hydroalcoholic extract	GC-MS, LC-MS, HPLC	[1]
65.	Withanoside IX	Methanol extract, Hydroalcoholic extract	HPLC, GC, NMR, ESI-MS, GC-MS, LC-MS	[1,12]
66.	Withanoside X	Methanol extract	HPLC, GC, NMR, ESI-MS	[12]
67.	Withastramonolide	Ethanol: water, aqueous ethanol extract	HPLC	[14,15]
68.	β -amyrin	Petroleum ether: acetone extract	UV, IR, C NMR, DEPT, HRFABMS, FABMS, EIMS	[8]

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