Supplementary material

Table S1

Specification of the reference compounds

Compound	Class	Source	Producer	FTIR
Gluten	Proteins	Wheat grains (*Triticum* sp.)	Sigma-Aldrich (St. Louis, MO, USA)	KBr tablet
Chitin	Polysaccharides	Crab shells	Sigma-Aldrich (St. Louis, MO, USA)	KBr tablet
Starch	Polysaccharides	Potato tubers (*Solanum tuberosum* L.)	Sigma-Aldrich (St. Louis, MO, USA)	KBr tablet
(1 → 3)-*α*-D-glucan	Polysaccharides	Basidiocarps of *Pleurotus ostreatus*	Cultivated by Ing. Rudolf Ryzner (Kojátky, Czech Republic)	KBr tablet
(1 → 3)(1 → 6)-*β*-D-glucan	Polysaccharides	Baker's yeast (*Saccharomyces cerevisiae*)	Sigma-Aldrich (St. Louis, MO, USA)	KBr tablet
Seed oil	Fats	Linseed (*Linum usitatissimum*)	Chain store	ATR
Ganoderic acids A, B and D	Triterpenes	Basidiocarps of *Ganoderma* sp.	Sigma-Aldrich (St. Louis, MO, USA)	ATR

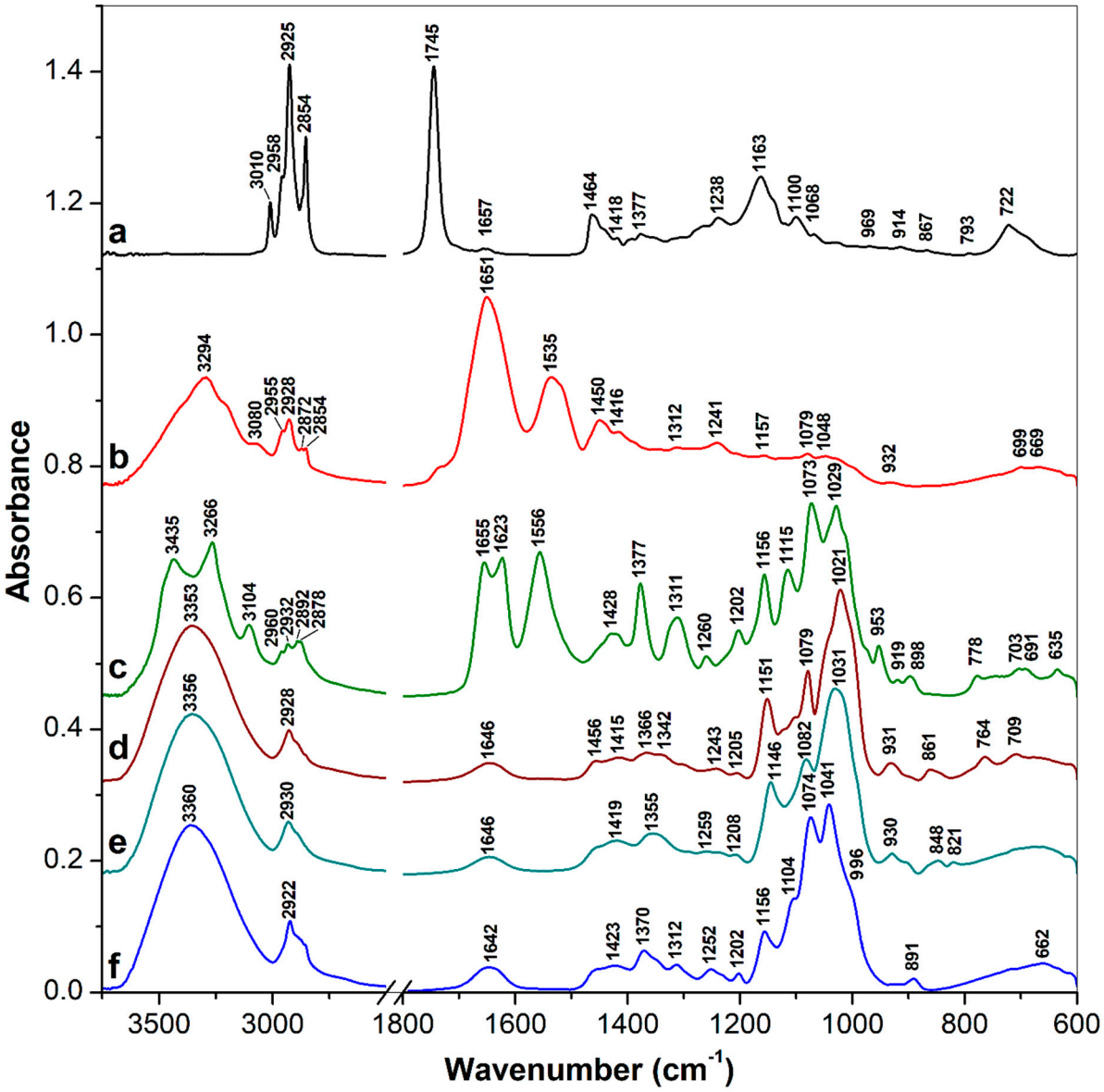

Figure S1. ATR-FTIR spectra of the reference compounds: (a) linseed oil, (b) wheat gluten, (c) chitin from crab shells, (d) corn starch, (e) fungal (1 → 3)-*α*-D-glucan, (f) yeast (1 → 3)(1 → 6)-*β*-D-glucan.

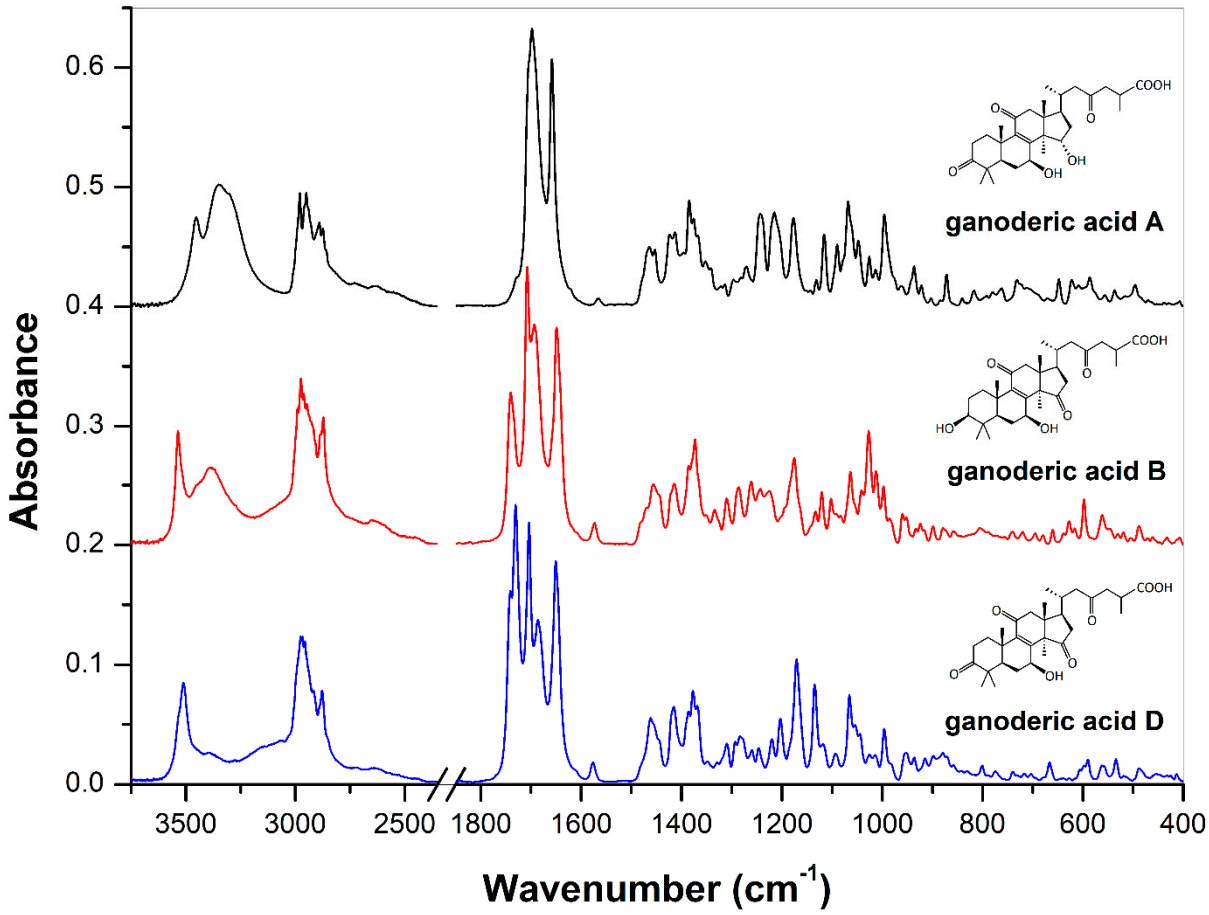

Figure S2. ATR-FTIR spectra of ganoderic acids A, B and D.

Table S2

Infrared band assignment for the triterpenoid-rich surface layers of *Ganoderma* basidiocarps in comparison with the reference data for ganoderic acids A, B and D [*]

Sample													Standards			Band assignment
1	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	GA A	GA B	GA D	[53,54,65–69]
													3452	3536	3511	ν(OH)
3301br	3295br	3356br	3382br	3373br	3353br	3332br	3403br	3394br	3366br	3380br	3317br	3303br	3352br	3389br	3393br	ν(OH), $\nu(H_2O)$
2979sh	2965sh	2971sh	2970sh	2978sh	2967	2967sh	2965	2976sh	2972sh	2967	2975sh	2973sh	2979	2974	2973	$\nu_{as}(CH_3)$
2960sh	2956	2951sh	2965	2970sh		2956		2958sh	2957	2952sh	2956sh	2956	2950	2961	2967	$\nu_{as}(CH_3)$
2935sh	2934sh	2929	2931			2939sh	2935			2930	2931sh	2936sh		2947	2956	$\nu_{as}(CH_2)$
2924	2921	2919sh	2920sh	2929	2927	2921	2925sh	2925	2925	2920sh	2926	2925		2926	2918	$\nu_{as}(CH_2)$
2902sh	2898sh	2896sh	2907sh	2898sh	2901sh	2902sh	2907sh			2897sh		2903sh	2890	2885		ν(CH)
2877	2875	2880	2880	2872sh	2878	2877	2880	2875	2877	2876	2873	2878	2874	2872	2877	$\nu_s(CH_3)$
2854	2852	2850sh	2851sh	2852sh	2855	2851	2850sh	2856	2854	2851sh	2854	2854	2860			$\nu_s(CH_2)$
2648sh	2662sh	2638sh	2660sh	2647sh	2670sh	2652sh	2656sh	2657sh	2678sh	2648sh	2630sh	2655sh	2631br	2655br	2639br	$\nu(OH)_{COOH}$
1748sh	1749sh	1743sh	1743sh	1750sh	1749sh	1741sh	1751sh	1747sh	1742sh	1740sh	1749sh	1747sh		1740	1741	ν(C=O) (5-m. ring)
1726sh	1737sh	1735sh		1737sh	1731sh	1727sh	1735sh		1734sh	1728sh	1725sh	1731sh			1731	ν(C=O) (5-m. ring)
1703	1701	1699	1703	1703	1704	1703	1704	1704	1703	1704	1703	1702	1698	1708	1704	ν(C=O) (open chain)
1678sh	1685sh	1688sh	1687	1687sh	1680sh				1685sh		1682sh	1682sh		1693	1686	ν(C=O) (6-m. ring)
1657	1655	1657	1659	1648sh	1658	1657	1665	1660	1657	1658	1657	1658	1659	1649	1651	ν(C=O) (α,β-unsat.)
1580sh		1586	1585		1581sh	1579		1583sh			1578	1578sh	1566	1573	1577	ν(C=C)
1472sh	1469sh	1471sh	1471sh	1469sh		1471sh	1468sh		1467sh		1471sh	1470sh	1464	1470	1462	$\delta_{as}(CH_3)$ (ang.)
1460	1459	1456	1455	1457	1461	1461	1457	1460	1457	1462	1460	1460	1453	1456		$\delta_{as}(CH_3)$ (cycl.), $\delta(CH_2)$
1422sh	1419sh	1427sh	1426sh	1428	1426sh	1423sh			1429sh	1424sh	1423sh	1426sh	1424			$\delta_{as}(CH_3)$ (open chain)
1415	1415	1416sh	1416	1413sh	1411	1415	1415	1416	1412	1413	1417	1413	1413	1415	1416	$\delta_{as}(CH_3)$ (cycl.), δ(OH)
1388sh	1386sh	1385sh	1386sh	1386sh	1387sh	1388sh			1387sh	1387sh	1388sh	1388sh	1385	1386	1386	$\delta_s(CH_3)$ (ang. 5/6 m. rings)

1380	1378	1378	1373	1377	1380	1379	1377	1381	1377	1379	1380	1379	1376	1373	1377	$\delta_s(CH_3)$ (ang. 6/6 m. rings)
1364sh	1363sh	1362sh		1362sh	1363sh	1363sh		1363sh	1362sh	1364sh	1364sh	1363sh	1368		1368	$\omega(CH_2)$, $\delta_s(CH_3)$ (cycl.)
1346		1346sh	1344sh	1348sh	1346sh	1344sh	1342sh	1344sh	1346sh	1344sh	1345	1347sh	1353	1351	1348	$\delta_s(CH_3)$ (open chain)
	1339sh	1334sh	1333sh	1332sh	1339sh	1331sh	1332sh		1332sh	1334sh		1333sh	1341	1334	1329	δ(CH), δ(OH)
1308sh	1309sh	1311	1311	1313	1314	1311sh	1311sh	1313sh	1311sh	1314sh	1312sh	1311sh	1314	1309	1309	δ(CH)
													1297		1293	
		1284sh											1281	1286	1283	$\omega(CH_2)$
1274	1274		1270	1271	1277	1277	1271sh	1273	1273	1277	1275	1276	1271	1261	1259	ν(CC), ω,τ(CH_2), δ(CH)
1244	1247sh	1243	1247	1249	1244	1245	1245	1245sh	1247sh	1246	1245	1242	1244	1243	1246	δ(OH), ν(CC), δ(CH)
1228sh	1226	1224sh	1239sh	1227sh	1227		1227sh	1232	1230		1227sh	1228		1225	1220	$\nu(CO)_{acid,\ ester}$
1216sh	1212sh	1207	1207	1208	1217sh	1220sh	1207sh	1207sh	1208	1219	1211sh	1217sh	1215		1203	δ(OH), δ(CH), τ(CH_2)
1172	1174	1166sh	1167sh	1180	1175	1173	1175	1174	1175	1174	1173	1173	1177	1175	1171	ν(CC), δ(OH)
1154sh	1162sh	1152sh	1155sh	1166sh	1162sh	1158sh	1148	1145sh	1149	1159sh	1155sh	1161sh	1144			ν(CC), τ(CH_2), δ(OH)
1135	1136	1137sh	1134sh	1140sh	1134	1132sh			1129sh	1134	1131sh	1133	1133	1133	1135	ν(CO), δ(OH), τ(CH_2)
1113	1116	1115	1113	1114	1116	1114	1114	1113	1114	1115	1113	1115	1116	1120	1119	ν(CC), ring vibrations
1098		1096	1095sh	1099sh	1098sh	1101		1097sh	1100sh	1097sh	1099	1097sh		1102		ν(CC), ν(CO), δ(OH), δ(CH)
	1089				1086sh		1080sh						1090	1092	1093	ν(CC), ν(CO), δ(OH), δ(CH)
		1077sh	1077	1078sh								1086sh		1083		ν(CC), ν(CO), δ(OH), δ(CH)
1063	1065sh					1063	1062sh	1063sh	1063sh	1063	1064		1068	1064	1065	ν(CO), ring breath
			1049	1055	1047	1051		1047	1049	1048	1052				1054	ν(CO), ring breath
1044	1042	1046					1038					1045	1047	1041	1044	ν(CO), ring breath
1025sh	1028sh	1036	1035	1035	1025sh	1025sh				1025sh	1025sh	1026sh	1024	1027	1025	$\omega(CCH_3)$
1014sh	1012sh	1018	1016	1016	1015sh	1015sh	1014sh	1016sh	1013sh	1014sh	1015sh	1014sh	1013	1012	1014	$\omega(CCH_3)$, ring def.
997	997	992sh	993sh	1002sh	997	996	991sh	995sh	992sh	996	997	997	996	997	996	ring breath, δ(CH)
975sh	975sh	977	975	984sh	976sh	975sh	977sh	976sh	976sh	975sh	975sh	975sh		985		ν(CC), δ(CH)
957	956	958sh	960sh	960sh	957	958	957sh	956sh	957sh	958	957	958	963	959, 952	952	ν(CC), ring vibrations

941	940	941	938	941	941	937sh	930	939sh	938sh	941	939	941	936	933	936	ν(CC), ω(CCH_3)
919	922	921	926	921	920							921	922	925		ν(CC), ρ(CH_2)
						918	916sh	918sh	919sh	919	918			917	915	
892	899	905	884	886	895	891	903sh	895sh	904	892	892	893	903	899	899	ν(CC), ring def.
876	876				876	876		881	874	875	876	875		879	879	ring vibr., ρ(CH_2)
		868	868	867			869						872		871	
			846				848	845sh	850sh					858	858	ν(CC), ring def.
842	841	843		842	832	840				838	840	836	841		842, 831	
812	821	814	813	813	818	813	815	813	813	815	812	815	818	806	801	ν(CC), ring def., ρ(CH_2)
793	791	800sh	798sh	798sh	793	796	799	793	791	795	794	790	793	789	790	ν(CC), ρ(CH_2)
773sh	779	778	779	778	770sh	776	769	769sh	776sh	769sh	779	779	780	775	774	ν(CC), ring def.
742	743	744	742	742sh	742	743	745sh	748sh	744sh	744	743	743	762	756		open chain def.
718	721	724sh	717sh	721sh	719	720	721sh	723sh	719sh	723	717	719	732	741	740	ring and open chain def.
693	709	712sh	699sh	714	706sh	709sh	713sh	717	715	714			713	720	717	ring def.
	696	698sh		696sh	695	695	700sh	700sh	695sh	700	696	703sh		695	703	ring vibr.
682sh	687	685sh	683	681			687sh	684sh	671sh		684sh	683		680		ring vibr.
668	673	677	669	661	668	669	669		663sh	666	667	671	670	661	666	ring vibr.
651	650	650	642sh		651	649			649sh	651	650	652	648	638	639	δ(CCC), δ(CCO)

* GA, ganoderic acid; br, broad; sh, shoulder; ν, stretching; $_{as}$, antisymmetric; $_{s}$, symmetric; vibr., vibration, def., deformation; 5(6)-m., 5/6 m., five(six)-member; unsat., unsaturated; ang., angle; ang. 5/6 m., angle between the five-member and six-member rings; cycl., cyclic; δ, (in-plane) bending vibration; ω, waging vibration; τ, twisting vibration; ρ, rocking vibration.