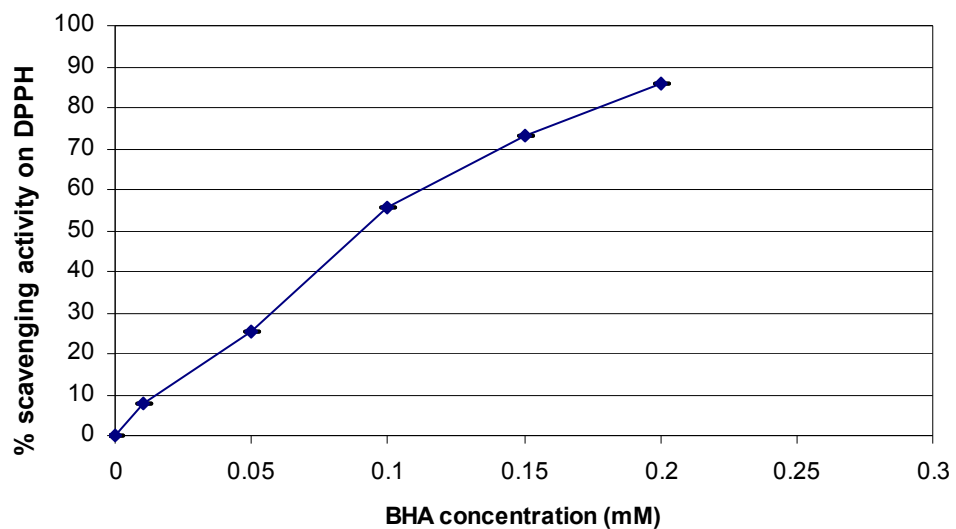
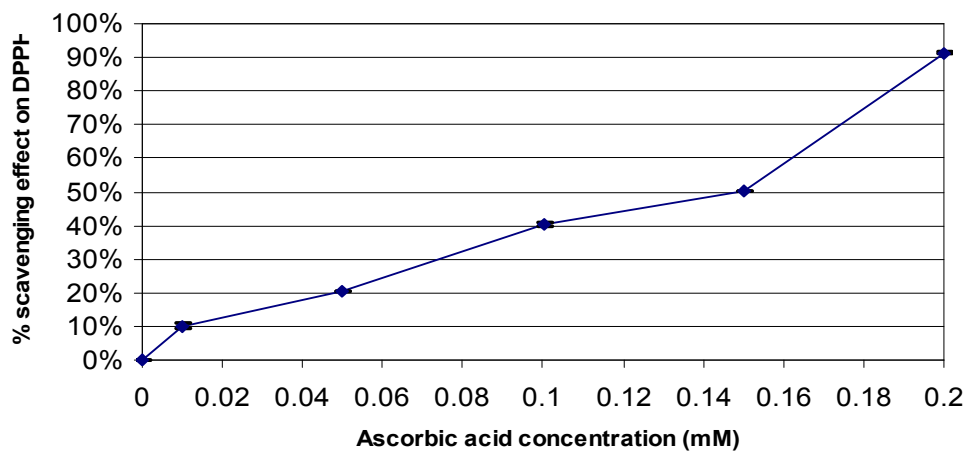


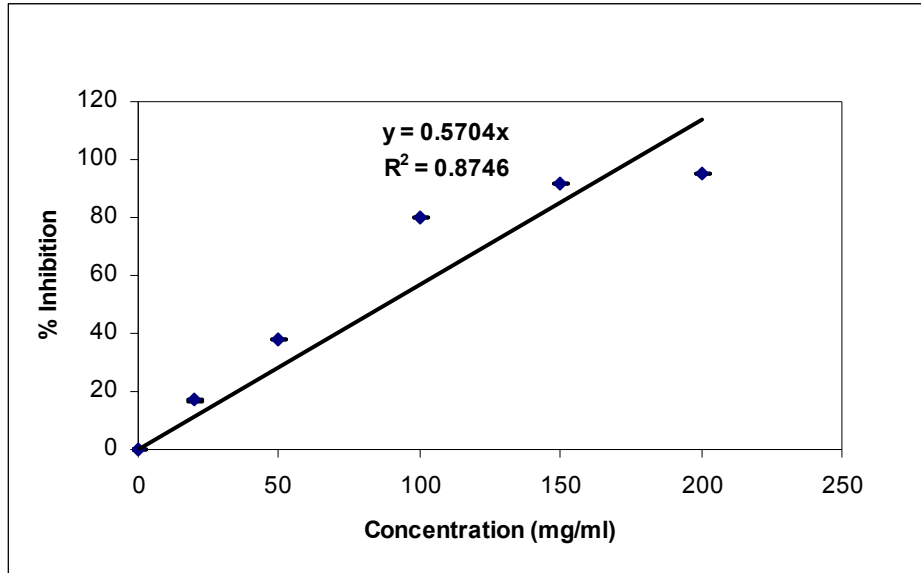
APPENDIX A: RAW DATA AND RESULTS FOR ANTIOXIDANT TESTS



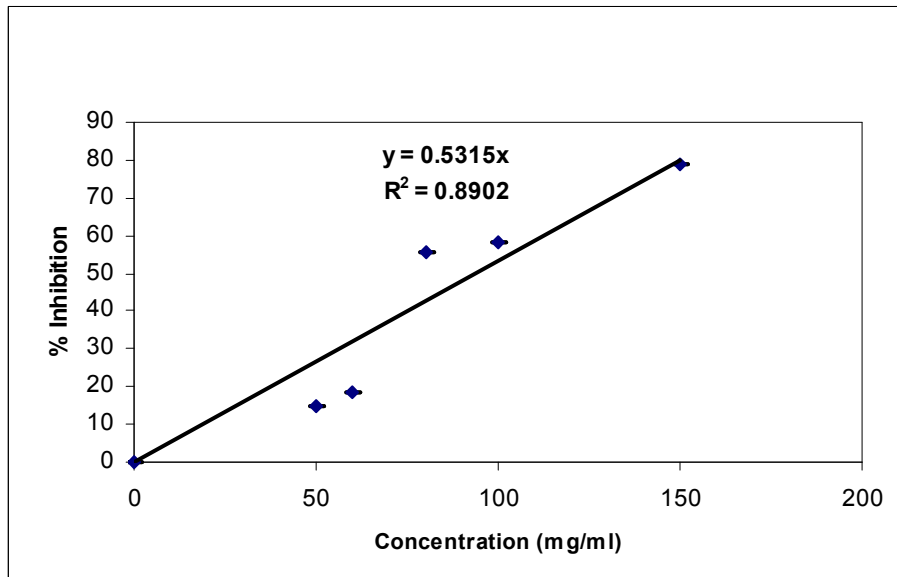
Scatter plot of scavenging effect of BHA on DPPH radical for determination of EC_{50} value



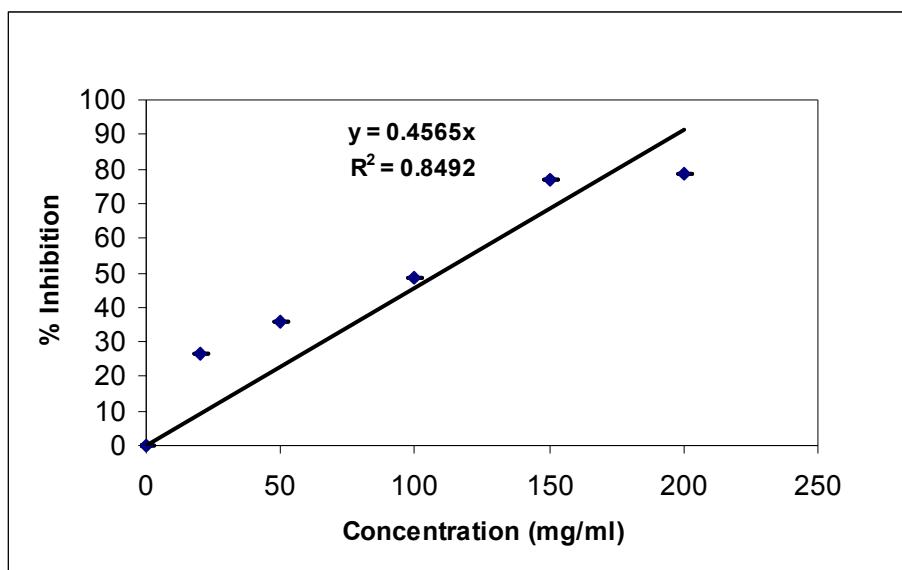
Scatter plot of scavenging effect of Ascorbic acid on DPPH radical for determination of EC_{50} value.



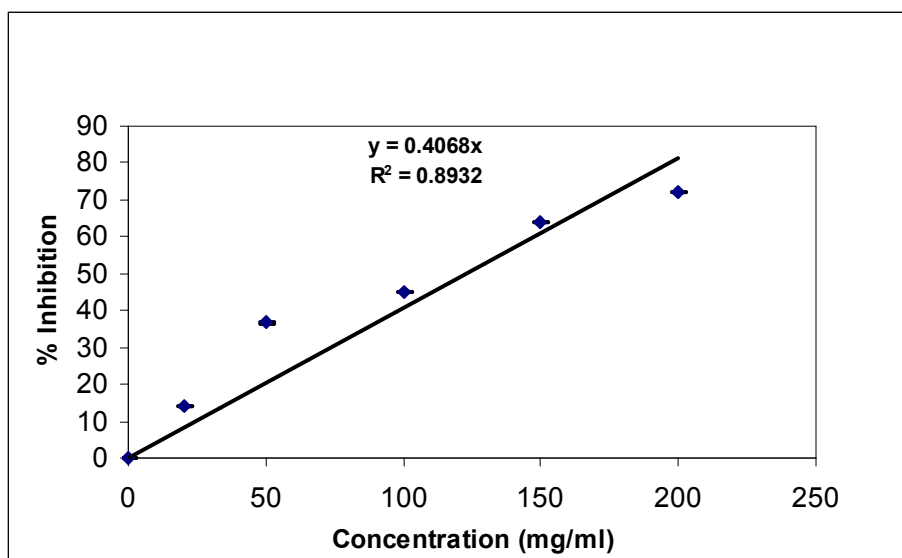
Scatter plot of scavenging effect of hot aqueous extract from *A. auricula-judae* fresh fruitbodies on DPPH radical for determination of EC₅₀ value.



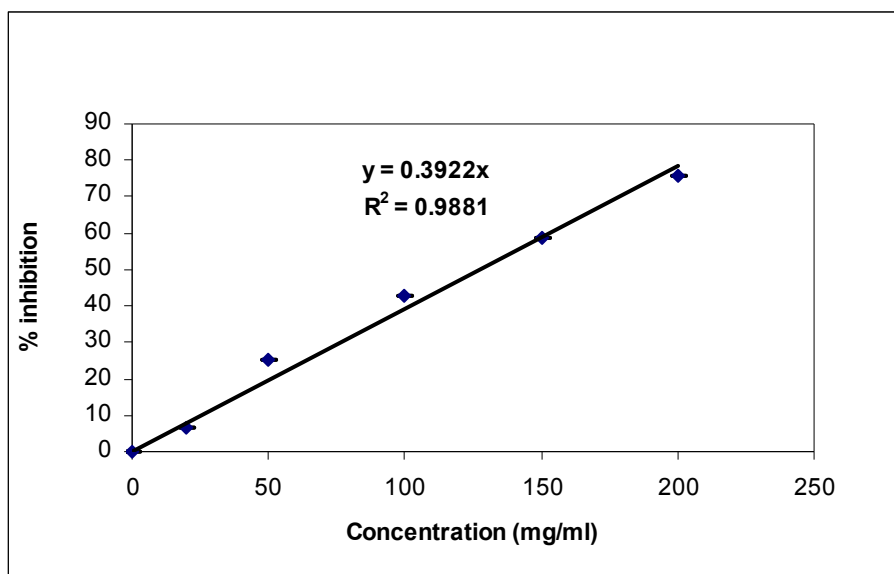
Scatter plot of scavenging effect of methanol extract from *A. auricula-judae* fresh fruitbodies on DPPH radical for determination of EC₅₀ value.



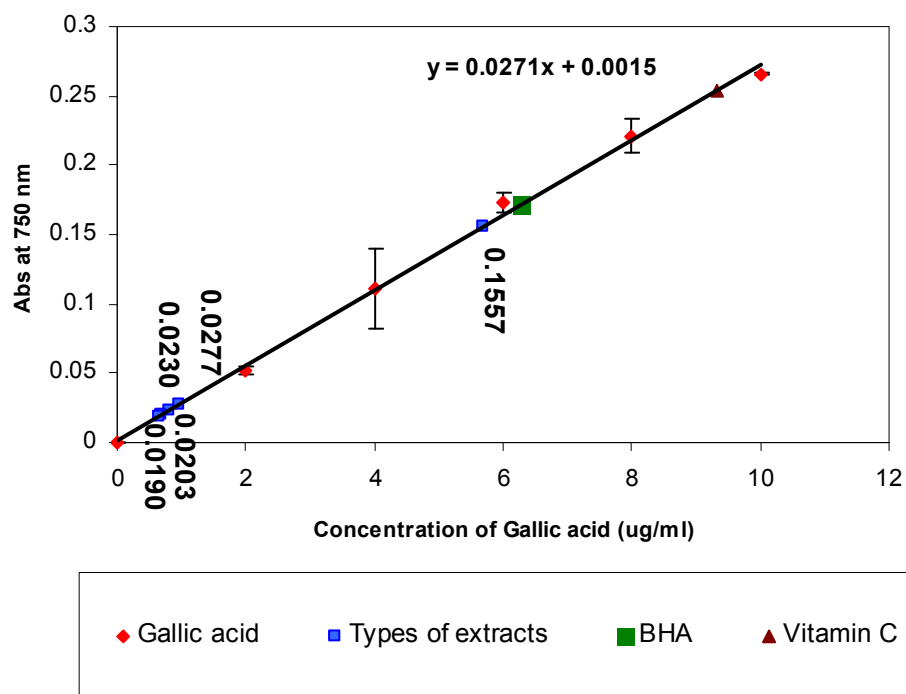
Scatter plot of scavenging effect of ethanol extract from *A. auricula-judae* fresh fruitbodies on DPPH radical for determination of EC₅₀ value.



Scatter plot of scavenging effect of dichloromethane extract from *A. auricula-judae* fresh fruitbodies on DPPH radical for determination of EC₅₀ value.



Scatter plot of scavenging effect of polysaccharides extract from *A. auricula-judae* fresh fruitbodies on DPPH radical for determination of EC₅₀ value.



The standard calibration curve for total phenolics content obtained from gallic acid using the Folin-Ciocalteu method. Ascorbic acid and BHA were used as standard for the assay.

Raw data of measurement of absorbances and scavenging effect percentages of fresh fruitbodies extracts of *A. auricula-judae* on DPPH radicals

Dichloromethane extract of *A. auricula-judae*

Time	Replicate1	Replicate2	Replicate3	Average	% Inhibition	Standard deviation
20 mg/ml						
0	0.373	0.375	0.383	0.377	7.14	0.004
1	0.364	0.366	0.375	0.368	9.36	0.005
2	0.357	0.36	0.368	0.362	10.84	0.005
15	0.344	0.347	0.358	0.350	13.79	0.006
30	0.341	0.346	0.358	0.348	14.29	0.007
45	0.341	0.345	0.359	0.348	14.29	0.008
50 mg/ml						
0						
1	0.419	0.433	0.46	0.437	28.71	0.017016
2	0.418	0.432	0.458	0.436	28.87	0.016573
15	0.414	0.43	0.451	0.432	29.53	0.015151
30	0.403	0.419	0.433	0.418	31.55	0.012257
45	0.373	0.389	0.401	0.388	36.6	0.01147
100 mg/ml						
0	0.419	0.433	0.46	0.437	28.71	0.017016
1	0.418	0.432	0.458	0.436	28.87	0.016573
2	0.414	0.43	0.451	0.432	29.53	0.015151
15	0.403	0.419	0.433	0.418	31.55	0.012257
30	0.373	0.389	0.401	0.388	36.6	0.01147
45	0.368	0.384	0.393	0.382	36.7	0.010339
150 mg/ml						
0						
1	0.359	0.362	0.358	0.359	33.76	0.0017
2	0.351	0.354	0.35	0.352	35.06	0.0017
15	0.34	0.345	0.34	0.342	36.9	0.002357
30	0.214	0.227	0.221	0.221	59.23	0.005312
45	0.186	0.201	0.194	0.194	64.21	0.006128
200 mg/ml						
0	0.343	0.336	0.347	0.342	36.9	0.004546
1	0.333	0.325	0.335	0.331	38.9	0.00432
2	0.32	0.312	0.32	0.317	41.5	0.003771
15	0.189	0.18	0.183	0.184	66.1	0.003742
30	0.156	0.148	0.15	0.151	72.1	0.003399
45	0.134	0.128	0.128	0.13	76.8	0.002828

Measurements of DPPH radical absorbance as a control for concentrations; 20mg/ml= 0.406 nm, 50 mg/ml= 0.6129 nm, 100 mg/ml= 0.6126 nm, 150 mg/ml and 200 mg/ml = 0.5419 nm.

Ethanol extract of *A. auricula-judae*

Time	Replicate1	Replicate2	Replicate3	Average	% Inhibition	Standard deviation
20 mg/ml						
0	0.327	0.327	0.325	0.326	20.87	0.0009428
1	0.325	0.325	0.323	0.323	21.6	0.0009428
2	0.323	0.323	0.32	0.317	23.05	0.0014142
15	0.308	0.307	0.306	0.306	25.73	0.0008165
30	0.308	0.305	0.304	0.305	25.97	0.0016997
45	0.305	0.304	0.302	0.304	26.21	0.0012472
100 mg/ml						
0	0.412	0.409	0.43	0.417	31.97	0.0092736
1	0.408	0.406	0.426	0.413	32.63	0.0089938
2	0.401	0.398	0.42	0.406	33.77	0.0097411
15	0.342	0.335	0.355	0.344	43.88	0.0082865
30	0.325	0.32	0.325	0.323	47.31	0.002357
45	0.32	0.317	0.32	0.319	47.96	0.0014142
150 mg/ml						
0	0.231	0.244	0.27	0.248	54.24	0.0162138
1	0.231	0.244	0.27	0.248	54.24	0.0162138
2	0.222	0.236	0.264	0.241	55.54	0.0174611
15	0.158	0.175	0.217	0.183	66.24	0.024797
30	0.153	0.17	0.21	0.178	67.16	0.0238933
45	0.11	0.128	0.181	0.139	74.35	0.0301367
200 mg/ml						
0	0.231	0.236	0.235	0.234	56.8	0.0021602
1	0.231	0.236	0.233	0.232	57	0.0020548
2	0.231	0.234	0.23	0.232	57.2	0.0016997
15	0.112	0.176	0.176	0.155	71.4	0.0301699
30	0.109	0.16	0.16	0.143	73.62	0.0240416
45	0.1	0.139	0.139	0.126	76.75	0.0183848

Measurements of DPPH radical absorbance as a control for concentrations; 20mg/ml= 0.412 nm, 100 mg/ml= 0.6129 nm, 150 mg/ml= 0.6419 nm and 200 mg/ml = 0.5418 nm.

Methanol extract of *A. auricula-judae*

Time	Replicate1	Replicate2	Replicate3	Average	% Inhibition	Standard deviation
50 mg/ml						
0	0.458	0.431	0.455	0.448	4.1	0.012083
1	0.457	0.429	0.455	0.447	4.3	0.012754
2	0.454	0.424	0.451	0.443	5.1	0.013491
15	0.451	0.395	0.441	0.429	8.1	0.024386

30	0.448	0.383	0.44	0.424	9.2	0.028941
45	0.441	0.377	0.39	0.403	13.7	0.02762
60 mg/ml						
0	0.591	0.588	0.585	0.588	4.5	0.002449
1	0.59	0.587	0.585	0.587	4.7	0.002055
2	0.588	0.586	0.584	0.586	4.9	0.001633
15	0.586	0.585	0.584	0.585	5	0.000816
30	0.585	0.583	0.582	0.583	5.4	0.001247
45	0.57	0.58	0.58	0.576	6.5	0.004714
80 mg/ml						
0	0.322	0.284	0.284	0.297	45.2	0.017913
1	0.319	0.281	0.281	0.294	45.8	0.017913
2	0.315	0.274	0.274	0.288	46.9	0.019328
15	0.31	0.238	0.238	0.262	51.7	0.033941
30	0.304	0.227	0.229	0.253	53.3	0.035836
45	0.299	0.217	0.22	0.245	54.8	0.037968
100 mg/ml						
0	0.284	0.286	0.287	0.286	47.29397	0.001247
1	0.28	0.284	0.282	0.282	47.97048	0.001633
2	0.274	0.271	0.276	0.274	49.508	0.002055
15	0.27	0.267	0.272	0.270	50.246	0.002055
30	0.264	0.26	0.268	0.264	51.29151	0.003266
45	0.25	0.245	0.26	0.252	53.56704	0.006236
150 mg/ml						
0	0.285	0.274	0.252	0.270	50.18	0.013719
1	0.277	0.266	0.245	0.263	51.48	0.013275
2	0.262	0.251	0.232	0.248	54.24	0.012392
15	0.189	0.171	0.157	0.172	68.27	0.013098
30	0.162	0.144	0.133	0.146	73.06	0.011954
45	0.142	0.123	0.115	0.127	76.57	0.011324

Measurements of DPPH radical absorbance as a control for concentrations; 50mg/ml= 0.4672 nm, 60 mg/ml= 0.616 nm, 80 mg/ml= 0.542 nm, 100 mg/ml = 0.542 nm and 150 mg/ml = 0.5419 nm.

Hot aqueous extract of *A. auricula-judae*

Time	Replicate1	Replicate2	Replicate3	Average	% Inhibition	Standard deviation
20 mg/ml						
0	0.434	0.425	0.437	0.432	14.20	0.0051
1	0.434	0.425	0.437	0.432	14.20	0.0051
2	0.433	0.423	0.435	0.43	14.50	0.0052
15	0.426	0.414	0.424	0.421	16.30	0.0052
30	0.424	0.412	0.42	0.419	16.70	0.0050

45	0.423	0.412	0.418	0.418	16.90	0.0045
50 mg/ml						
0	0.371	0.366	0.36	0.366	27.20	0.0045
1	0.37	0.366	0.36	0.365	27.40	0.0041
2	0.368	0.364	0.357	0.363	27.80	0.0045
15	0.344	0.339	0.330	0.338	32.80	0.0058
30	0.334	0.33	0.317	0.327	34.90	0.0073
45	0.324	0.323	0.307	0.318	36.80	0.0078
100 mg/ml						
0	0.27	0.257	0.257	0.261	48.11	0.0061
1	0.269	0.257	0.256	0.26	48.31	0.0059
2	0.265	0.252	0.251	0.256	49.11	0.0064
15	0.223	0.209	0.208	0.213	57.65	0.0068
30	0.198	0.185	0.184	0.189	62.43	0.0064
45	0.181	0.167	0.165	0.171	66.00	0.0071
150 mg/ml						
0	0.164	0.155	0.192	0.170	66.20	0.0158
1	0.164	0.154	0.192	0.170	66.20	0.0161
2	0.157	0.147	0.186	0.163	67.54	0.0165
15	0.096	0.089	0.128	0.104	79.32	0.0170
30	0.063	0.056	0.092	0.070	86.08	0.0156
45	0.042	0.036	0.075	0.051	89.86	0.0171
200 mg/ml						
0	0.093	0.097	0.111	0.100	80.12	0.0077
1	0.093	0.096	0.11	0.099	80.32	0.0074
2	0.091	0.095	0.107	0.098	80.50	0.0068
15	0.041	0.045	0.056	0.047	90.65	0.0063
30	0.024	0.028	0.036	0.029	94.23	0.0050
45	0.021	0.025	0.03	0.025	95.02	0.0037

Measurements of DPPH radical absorbance as a control for concentrations; 20mg/ml= 0.5433 nm, 50 mg/ml= 0.5027 nm, 100 mg/ml= 0.5029 nm, 150 mg/ml = 0.50295 nm and 200 mg/ml = 0.503 nm.

Polysaccharides extract of *A. auricula-judae*

Time	Replicate1	Replicate2	Replicate3	Average	% Inhibition	Standard deviation
20 mg/ml						
0	0.568	0.561	0.561	0.5633	2.54	0.0033
1	0.568	0.561	0.561	0.5633	2.54	0.0033
2	0.561	0.561	0.553	0.5583	3.40	0.0038
15	0.56	0.559	0.546	0.5550	3.98	0.0064
30	0.553	0.55	0.542	0.5483	5.13	0.0046
45	0.55	0.533	0.539	0.5407	6.46	0.0070
50 mg/ml	0.455	0.464	0.452	0.4570	20.93	0.0051

0						
1	0.454	0.464	0.452	0.4567	20.99	0.0052
2	0.453	0.464	0.452	0.4563	21.05	0.0054
15	0.44	0.461	0.450	0.4503	22.09	0.0086
30	0.439	0.46	0.445	0.4480	22.49	0.0088
45	0.429	0.459	0.44	0.4427	23.41	0.0124
100 mg/ml						
0	0.364	0.337	0.357	0.3527	38.99	0.0114
1	0.364	0.336	0.356	0.3520	39.10	0.0118
2	0.363	0.336	0.346	0.3483	39.73	0.0111
15	0.361	0.326	0.330	0.3390	41.35	0.0156
30	0.36	0.324	0.328	0.3373	41.64	0.0161
45	0.35	0.32	0.32	0.3300	42.91	0.0141
150 mg/ml						
0	0.266	0.252	0.266	0.2613	54.79	0.0066
1	0.266	0.251	0.265	0.2607	54.90	0.0068
2	0.266	0.251	0.264	0.2603	54.96	0.0066
15	0.258	0.245	0.255	0.2527	56.29	0.0056
30	0.257	0.243	0.251	0.2503	56.69	0.0057
45	0.249	0.24	0.251	0.2467	57.32	0.0048
200 mg/ml						
0	0.156	0.168	0.16	0.1613	72.09	0.0050
1	0.156	0.167	0.16	0.1610	72.15	0.0045
2	0.155	0.167	0.159	0.1603	72.26	0.0050
15	0.149	0.16	0.154	0.1543	73.30	0.0045
30	0.148	0.15	0.153	0.1503	73.99	0.0021
45	0.14	0.142	0.145	0.1423	75.37	0.0021

Measurements of DPPH radical absorbance as a control for concentrations; 20mg/ml= 0.578 nm, 50 mg/ml= 0.5779 nm, 100 mg/ml= 0.5781 nm, 150 mg/ml = 0.5779 nm and 200 mg/ml = 0.5779 nm.

FRAP reducing power activity of *A. auricula-judae* fresh fruitbodies extracts .Absorbance was measured at 700 nm and the average represented by triplicate data and standard deviation

Ethanol

Concentration	Replicate1	Replicate2	Replicate3	Average	Standard deviation
0	0	0	0	0	0
5	0.576	0.547	0.592	0.5717	0.018625
10	0.993	0.992	0.995	0.9933	0.001247
15	1.137	1.154	1.152	1.1477	0.007587
20	1.211	1.212	1.202	1.2083	0.004497

Methanol

Concentration	Replicate1	Relpicate2	Replicate3	Average	Standard deviation
0	0	0	0	0	0
5	0.593	0.592	0.598	0.5943	0.002625
10	1	1.08	1.09	1.0567	0.040277
15	1.29	1.28	1.21	1.2600	0.03559
20	1.465	1.43	1.494	1.4630	0.026166

Dichloromethane

Concentration	Replicate1	Relpicate2	Replicate3	Average	Standard deviation
0	0	0	0	0	0
5	0.382	0.412	0.465	0.4197	0.034316
10	0.945	0.924	0.914	0.9277	0.012919
15	1.053	0.9873	1.012	1.0174	0.027096
20	1.109	1.167	1.13	1.1353	0.023977


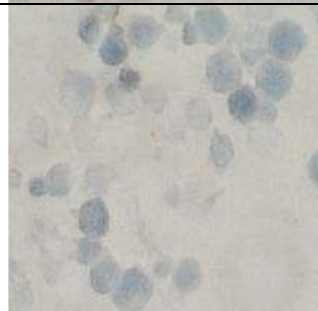

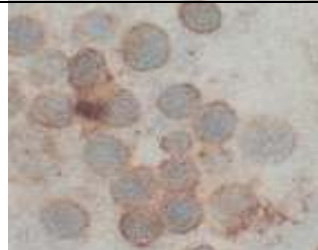
Hot aqueous

Concentration	Replicate1	Replicate2	Replicate3	Average	Standard deviation
0	0	0	0	0	0
5	1.634	1.672	1.669	1.6583	0.01725
10	1.718	1.71	1.7	1.7093	0.007364
15	1.859	1.821	1.891	1.8570	0.028612
20	1.905	1.9029	1.93	1.9126	0.01231



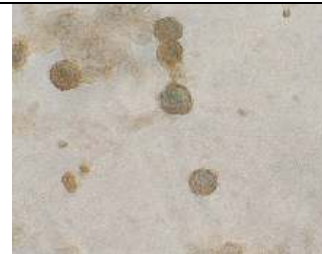

Polysaccharides

Concentration	Replicate1	Relpicate2	Replicate3	Average	Standard deviation
0	0	0	0	0	0
5	0.095	0.061	0.078	0.0780	0.01388
10	0.279	0.249	0.192	0.2400	0.036083
15	0.514	0.412	0.461	0.4623	0.041652
20	0.506	0.498	0.477	0.4937	0.012229

APPENDIX B: ANTI-HUMAN PAPILLOMAVIRUS-18 E6 ASSAY RESULT

Extract Ethanol of <i>A. auricula-judae</i> fresh fruitbodies	Concentration of extract	Morphology of cells	Intensity of reddish brown stain
	25 µg/ml	Intact	+4
	100 µg/ml	Lysis	—
Methanol of <i>A. auricula-judae</i> fresh fruitbodies	Concentration of extract	Morphology of cells	Intensity of reddish brown stain
	25 µg/ml	Intact and seems to be swallowed in structure	+4
	100 µg/ml	Intact but some cells show lysis	+1



Appendix B Appearance of CaSki cells after treatment with ethanol and methanol extract of *A. auricula-judae* fresh fruitbodies (400x) Note: Classification for the intensity of staining as no stain (-), weak (+1), moderate (+2), strong (+3) and very strong (+4).

Extract Dichloromethane of <i>A. auricula-judae</i> fresh fruitbodies	Concentration of extract	Morphology of cells	Intensity of reddish brown stain
	25 µg/ml	Intact	+4
	100 µg/ml	Lysis	+
Polysaccharides of <i>A. auricula-judae</i> fresh fruitbodies	Concentration of extract	Morphology of cells	Intensity of reddish brown stain
	25 µg/ml	Intact and swallowed structure	+3
	100 µg/ml	Some cells show lysis	+

Appendix B

Appearance of CaSki cells after treatment with dichloromethane and polysaccharides extract of *A. auricula-judae* fresh fruitbodies (400x)

Note: Classification for the intensity of staining as no stain (-), weak (+1), moderate (+2), strong (+3) and very strong (+4).

Hot aqueous of <i>A. auricula-judae</i> fresh fruitbodies	Concentration of extract	Morphology of cells	Intensity of reddish brown
	25 µg/ml	Intact	+2
	100 µg/ml	Intact but some lysis	+1

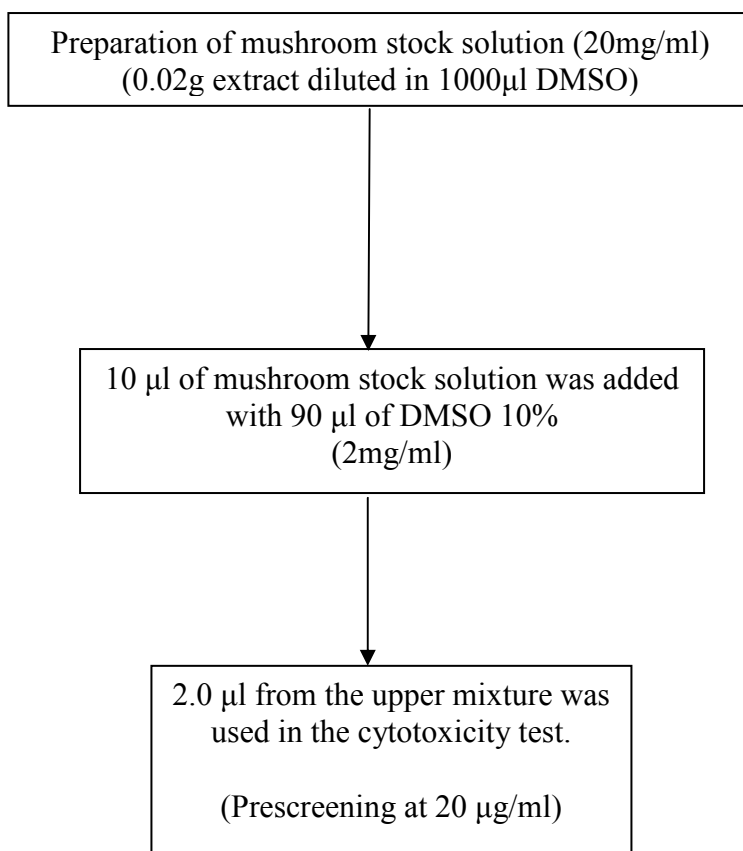
Appendix B

Appearance of CaSki cells after treatment with hot aqueous extract of *A. auricula-judae* fresh fruitbodies (400x)

Note: Classification for the intensity of staining as no stain (-), weak (+1), moderate (+2), strong (+3) and very strong (+4).

APPENDIX C: MEDIA AND EXTRACT PREPARATION FOR CYTOTOXICITY ASSAY

(1) Mushroom extracts stock serial dilution for cytotoxicity assay



(2) Glassware preparation and sterilization techniques

Washing procedure

The glasswares such as pipettes, bottles, beakers and conical flasks were soaked overnight with 7X detergent (Flowlab). It is followed soaking in tap water for another 24 hours. All apparatus were rinsed with distilled water. Than they were dried in hot air oven (Memmert)

at 60°C. The white streaks observation on the glasswares or pipettes indicates inadequate rinsing procedure. Rinsing was repeated to avoid the occurrence of white streaks.

Autoclave procedure

Before the autoclaving, the bottles with plastic caps were loosely screwed to allow penetration and flee of steam during the sterilization cycle. Beakers were wrapped with aluminium foil while disposable blue tips, yellow tips and provials were sealed in plastic bags. All things were autoclaved for 20 min at 120°C and 1.1kg/cm² (15 lb) pressure. After cooling, the loose caps were tightened immediately. The wet disposable tips and provials were dried in an oven at 60°C.

Dry sterilization

Pipettes were plugged with cotton wool and placed inside aluminium pipette canister by locating the tips at the closed end of the canister. The canister was closed tightly and heat sterilized at 180°C for 2 hours in an oven (Memmert).

(3) Preparation of media and chemicals

Types of medium for different cancer cell culture

Type of cancer cells	Type of medium
CaSki, MCF 7	Rosewell Park Memorial Institute (RPMI 1640)
MRC 5	Modified Eagle Medium (MEM)
KB	Medium 199
Skov	Dulbecco's Modified Eagle Medium (DMEM)
HCT 119	McCoy's Medium

Preparation of Basic Medium 199

One sachet of medium 199 (Flow Lab, Australia) containing Earle's salt with L-Glutamine and HEPES (N-2-Hydroxyethyl-Piperazine-N-2-Ethane-Sulfonic Acid, Sigma, USA) without sodium bicarbonate (Flow Lab.) was made up to 1 litre with distilled water. Two grams of sodium bicarbonate (NaHCO_3 , Merck, Germany) was added to the medium. The medium was filter sterilized using a 0.22 μm filter membrane (Schleicher & Schuell) and stored at 4°C for up to 4 months.

Preparation of Basic RPMI 1640 Medium

Medium was prepared by dissolving 10.39 g of RPMI 1640 powder (Sigma) and 2.0 g of sodium bicarbonate in 1 litre of distilled water. The pH of the medium was calibrated to pH 7.4 (Hanna Instruments 8417). The medium was then filter sterilized using a 0.22 μm filter membrane (Schleicher & Schuell) into sterile bottles and kept at 4°C.

Preparation of Basic DMEM (without FBS)

Medium was prepared by dissolving 13.38 g of DMEM powder (Sigma) and 3.7 g of sodium bicarbonate in 1 litre of distilled water allowing mixing times between additions. The pH of the medium was calibrated to pH 7.0 (Hanna Instruments 8417). The medium was then filter sterilized using a 0.22 μm filter membrane ((Schleicher & Schuell) into sterile bottles and kept at 4°C.

10% Supplemented Medium 199 and RPMI 1640 Medium

100 ml of 10% supplemented medium 199 and RPMI 1640 were prepared using 90 ml of basic medium, supplemented with 10 ml inactivated Foetal Calf Serum (FCS, PAA Lab. Austria), 1 ml (100 $\mu\text{g}/\text{ml}$) and 1 ml (100 IU/ml) of streptomycin and penicillin (PAA Lab.

Austria) respectively and 1 ml of fungizone (PAA Lab Austria). The media was filter sterilized using a 0.22 μ m filter membrane and stored at 4°C for up to 2 weeks.

10% DMEM

200 ml of 10 % supplemented DMEM was prepared using 180 ml basic medium, supplemented with 20 ml Fetal Bovine Serum (FBS).

20% Supplemented Medium 199 and RPMI 1640 Medium

50 ml of 20% supplemented medium 199 or RPMI 1640 was prepared using a 45 ml of 10% supplemented medium was added with 5 ml inactivated Fetal Calf Serum (FCS). The medium was filter sterilized using a 0.22 μ m filter membrane and stored at 4°C for up to 2 weeks. This 20% supplemented medium was used to revive cells.

Phosphate Buffered Saline (PBS)

The phosphate buffered saline (PBS) was prepared using 1.52 g of sodium phosphate anhydrous (NaHPO_4 , Merck), 0.58 g of potassium dihydrogen orthophosphate (KH_2PO_4 , Merck) and 8.5 g of sodium chloride (NaCl) that were dissolved in distilled water and the volume was made up to 1 litre. The pH of the buffer was adjusted to 7.2 using a pH meter (Hanna Instruments). The buffer was then filtered using a 0.22 μ m filter membrane and stored at room temperature.

10% Dimethylsulfoxide (DMSO)

9 ml of sterilized distilled water was added to 1 ml of 99.9% dimethylsulfoxide (Sigma)

Tryphan blue

0.2 g of tryphan blue was weighed and diluted with 50 ml of distilled water to get 0.4% of tryphan blue.

(4) Preparation of Solutions for Neutral Red cytotoxicity assay

Neutral Red Stock Solution

0.4 g of Neutral Red (ICN, USA) was dissolved in 100 ml distilled water. The solution was kept at 4°C.

Neutral Red Medium

The Neutral Red stock solution was diluted (1:80) in treatment culture medium to give a final concentration of 50 µg/ml. Prepared Neutral Red medium were incubated overnight at room temperature in the dark. This solution was centrifuged at 1000 rpm for 10 minutes before any use to remove any fine needle-like precipitate of dye crystals.

Neutral Red Washing Solution

10% of calcium chloride (Sigma) was dissolved in 1 ml formaldehyde (Sigma) and 89 ml of distilled water. The solution was kept at 4°C.

Neutral Red Resorb Solution

1 ml of glacial acetic acid (BDH) was dissolved in 50 ml of absolute ethanol (Hamburg) and 49 ml of distilled water. The solution was kept at 4°C.

Appendix C: Inhibition percentages of Skov, CaSki, MCF 7, KB, HCT 119, HT 29 and MRC 5 cells treated with *Auricularia auricula-judae* fresh fruitbodies (methanol, ethanol, dichloromethane, polysaccharides and hot aqueous) extracts.

Types of cancer cells	Percentage of inhibition \pm Standard deviation (%)				
	Ethanol	Methanol	DCM	Hot aqueous	Polysaccharides
Skov (Human ovarian cancer cells)	27.1 \pm 2.56	36.7 \pm 2.14	29.3 \pm 4.27	30.2 \pm 2.88	18.6 \pm 3.54
CaSki (Human cervical cancer cells)	25.4 \pm 2.22	8.8 \pm 2.78	31.8 \pm 5.19	6.1 \pm 3.57	1.7 \pm 0.61
MCF 7 (Human breast cancer cells)	1.7 \pm 1.05	6.1 \pm 0.79	36.1 \pm 3.08	21.9 \pm 3.52	29.7 \pm 2.19
KB (Human oral epidermoid cancer cells)	20.5 \pm 4.38	7.9 \pm 1.21	16.1 \pm 2.96	28.5 \pm 3.44	8.4 \pm 3.39
HCT 119 (Human colon cancer cells)	13.9 \pm 4.03	22.8 \pm 3.34	13.7 \pm 0.74	6.6 \pm 1.96	24.4 \pm 2.63
HT 29 (Human intestinal colon cancer cells)	11.7 \pm 5.36	10.5 \pm 5.43	8.4 \pm 3.05	4.5 \pm 1.48	22.0 \pm 0.92
MRC 5 (Human fetal lung epithelium normal cells)	2.1 \pm 2.98	1.6 \pm 0.47	1.5 \pm 2.11	3.1 \pm 1.60	0.7 \pm 0.46

The results represented in inhibition percentages mean of triplicate with standard deviation. The percentages of inhibition obtained at the concentration of 20 μ g/ml prescreening with *A.auricula_judae* fresh fruitbodies extracts.

APPENDIX D:- DATA AND STATISTICAL ANALYSIS

(1) One-Way ANOVA to compare decrease in absorbances values to determine time taken to reach steady state during scavenging of DPPH radicals. Results represented by absorbance in mean values of triplicate for each *Auricularia auricula-judae* fresh fruitbodies extracts

Dichloromethane

Time	20 mg/ml	50 mg/ml	100 mg/ml	150 mg/ml	200 mg/ml
0	0.0287	0.059*	0.092*	0.1907*	0.219*
1	0.02*	0.0577*	0.0903*	0.1827*	0.209*
2	0.013*	0.0533*	0.0843*	0.1727*	0.195*
15	0.001*	0.04	0.0583*	0.0517*	0.062*
30	0.0	0.009333	0.021*	0.02467*	0.029*
45	0.0	0.003333	0.011*	0.0077*	0.0077

* denotes the significancy level of mean absorbances achieved per time in minutes for each extracts in each different concentrations and the steady state achieved at 45 minutes time.

Ethanol

Time	20 mg/ml	50 mg/ml	100 mg/ml	150 mg/ml	200 mg/ml
0	0.023*	0.0713*	0.1006*	0.1223*	0.1187*
1	0.021*	0.0447*	0.097*	0.1223*	0.118*
2	0.01167*	0.0257*	0.09*	0.115*	0.116*
15	0.00367	0.0173*	0.0277*	0.0573*	0.0393*
30	0.00233	0.01067	0.007	0.0517*	0.0277
45	0.000333	0.0023	0.00267	0.0137	0.01067

* denotes the significancy level of mean absorbances achieved per time in minutes for each extracts in each different concentrations and the steady state achieved at 30 minutes time

Methanol

Time	50 mg/ml	60 mg/ml	80 mg/ml	100 mg/ml	150 mg/ml
0	0.0493*	0.0826*	0.075*	0.058*	0.155*
1	0.0483*	0.082*	0.072*	0.0543*	0.148*
2	0.0443	0.08066*	0.066*	0.046*	0.134*
15	0.0303	0.0796*	0.0403	0.042*	0.058*
30	0.025	0.078*	0.03167	0.0363*	0.0376*
45	0.004	0.0713*	0.02367	0.024*	0.012

* denotes the significancy level of mean absorbances achieved per time in minutes for each extracts in each different concentrations and the steady state achieved at 45 minutes time

Hot aqueous

Time	20 mg/ml	50 mg/ml	100 mg/ml	150 mg/ml	200 mg/ml
0	0.014*	0.05133*	0.1*	0.1293*	0.076*
1	0.014*	0.051*	0.09933*	0.129*	0.0753*
2	0.0123*	0.04867*	0.09467*	0.1223*	0.0733*
15	0.0333	0.0233*	0.052*	0.0633*	0.023*
30	0.00067	0.01267*	0.0276*	0.0293	0.005
45	0.00033	0.00367	0.00967	0.01	0.001

* denotes the significancy level of mean absorbances achieved per time in minutes for each extracts in each different concentrations and the steady state achieved at 30 minutes time

Polysaccharides

Time	20 mg/ml	50 mg/ml	100 mg/ml	150 mg/ml	200 mg/ml
0	0.0246*	0.0236*	0.02267	0.02133*	0.0203*
1	0.0246*	0.0233*	0.022	0.02067*	0.02*
2	0.0196*	0.023*	0.0183	0.02033*	0.0193*
15	0.0163*	0.017	0.009	0.01267*	0.0133*
30	0.0096	0.01467	0.00733	0.01033	0.0093*
45	0.002	0.00933	0.0	0.00667	0.00133

* denotes the significancy level of mean absorbances achieved per time in minutes for each extracts in each different concentrations and the steady state achieved at 45 minutes time

1.1) One-Way ANOVA to compare decrease in absorbances values to determine time taken to reach steady state during scavenging of DPPH radicals. Results represented by mean of the extracts and * denotes statistically significant at P-value of the F-test is less than 0.05 from one level time to another.

Dichloromethane extract

Concentrations	Time Contrast	Mean Difference	Limits
20 mg/ml	0-1	0.00866667	0.0130882
	0-2	*0.0153333	0.0130882
	0-15	*0.0273333	0.0130882
	0-30	*0.0286667	0.0130882
	0-45	*0.0286667	0.0130882
	0-60	*0.0286667	0.0130882
	1-2	0.00666667	0.0130882
	1-15	*0.0186667	0.0130882
	1-30	*0.02	0.0130882
	1-45	*0.02	0.0130882
	1-60	*0.02	0.0130882
	2-15	0.012	0.0130882

	2-30	*0.0133333	0.0130882
	2-45	*0.0133333	0.0130882
	2-60	*0.0133333	0.0130882
	15-30	*0.0133333	0.0130882
	15-45	*0.0133333	0.0130882
	15-60	*0.0133333	0.0130882
	30-45	0.0	0.0130882
	30-60	0.0	0.0130882
	45-60	0.0	0.0130882
100 mg/ml	0-1	0.00166667	0.00400799
	0-2	*0.00766667	0.00400799
	0-15	*0.0336667	0.00400799
	0-30	*0.0713333	0.00400799
	0-45	*0.0813333	0.00400799
	0-60	*0.092	0.00400799
	1-2	*0.006	0.00400799
	1-15	*0.032	0.00400799
	1-30	*0.0696667	0.00400799
	1-45	*0.0796667	0.00400799
	1-60	*0.0903333	0.00400799
	2-15	*0.026	0.00400799
	2-30	*0.0636667	0.00400799
	2-45	*0.0736667	0.00400799
	2-60	*0.0843333	0.00400799
	15-30	*0.0376667	0.00400799
	15-45	*0.0476667	0.00400799
	15-60	*0.0583333	0.00400799
	30-45	*0.01	0.00400799
	30-60	*0.0206667	0.00400799
	45-60	*0.0106667	0.00400799

Dichloromethane extract

Concentrations	Time Contrast	Mean Difference	Limits
150 mg/ml	0-1	0.008	0.0115974
	0-2	*0.018	0.0115974
	0-15	*0.139	0.0115974
	0-30	*0.166	0.0115974
	0-45	*0.183	0.0115974
	0-60	*0.190667	0.0115974
	1-2	0.01	0.0115974
	1-15	*0.131	0.0115974
	1-30	*0.158	0.0115974
	1-45	*0.175	0.0115974
	1-60	*0.182667	0.0115974
	2-15	*0.121	0.0115974

	2-30	*0.148	0.0115974
	2-45	*0.165	0.0115974
	2-60	*0.172667	0.0115974
	15-30	*0.027	0.0115974
	15-45	*0.044	0.0115974
	15-60	*0.0516667	0.0115974
	30-45	*0.017	0.0115974
	30-60	*0.0246667	0.0115974
	45-60	0.00766667	0.0115974
200 mg/ml	0-1	*0.011	0.00824055
	0-2	*0.0246667	0.00824055
	0-15	*0.158	0.00824055
	0-30	*0.190667	0.00824055
	0-45	*0.212	0.00824055
	0-60	*0.219667	0.00824055
	1-2	*0.0136667	0.00824055
	1-15	*0.147	0.00824055
	1-30	*0.179667	0.00824055
	1-45	*0.201	0.00824055
	1-60	*0.208667	0.00824055
	2-15	*0.133333	0.00824055
	2-30	*0.166	0.00824055
	2-45	*0.187333	0.00824055
	2-60	*0.195	0.00824055
	15-30	*0.0326667	0.00824055
	15-45	*0.054	0.00824055
	15-60	*0.0616667	0.00824055
	30-45	*0.0213333	0.00824055
	30-60	*0.029	0.00824055
	45-60	0.00766667	0.00824055

* denotes a statistically significant difference at p value <0.05

Ethanol extract

Concentrations	Time Contrast	Mean Difference	Limits
20 mg/ml	0-1	0.002	0.00452162
	0-2	0.00433333	0.00452162
	0-15	*0.0193333	0.00452162
	0-30	*0.0206667	0.00452162
	0-45	*0.0226667	0.00452162
	0-60	*0.023	0.00452162
	1-2	0.00233333	0.00452162
	1-15	*0.0173333	0.00452162
	1-30	*0.0186667	0.00452162
	1-45	*0.0206667	0.00452162
	1-60	*0.021	0.00452162

	2-15	*0.015	0.00452162
	2-30	*0.0163333	0.00452162
	2-45	*0.0183333	0.00452162
	2-60	*0.0186667	0.00452162
	15-30	0.00133333	0.00452162
	15-45	0.00333333	0.00452162
	15-60	0.00366667	0.00452162
	30-45	0.002	0.00452162
	30-60	0.00233333	0.00452162
	45-60	0.000333333	0.00452162
50 mg/ml	0-1	*0.0266667	0.013077
	0-2	*0.0456667	0.013077
	0-15	*0.054	0.013077
	0-30	*0.0606667	0.013077
	0-45	*0.069	0.013077
	0-60	*0.0713333	0.013077
	1-2	*0.019	0.013077
	1-15	*0.0273333	0.013077
	1-30	*0.034	0.013077
	1-45	*0.0423333	0.013077
	1-60	*0.0446667	0.013077
	2-15	0.00833333	0.013077
	2-30	*0.015	0.013077
	2-45	*0.0233333	0.013077
	2-60	*0.0256667	0.013077
	15-30	0.00666667	0.013077
	15-45	*0.015	0.013077
	15-60	*0.0173333	0.013077
	30-45	0.00833333	0.013077
	30-60	0.0106667	0.013077
	45-60	0.00233333	0.013077
100 mg/ml	0-1	0.00366667	0.014938
	0-2	0.0106667	0.014938
	0-15	*0.073	0.014938
	0-30	*0.0936667	0.014938
	0-45	*0.098	0.014938
	0-60	*0.100667	0.014938
	1-2	0.007	0.014938
	1-15	*0.0693333	0.014938
	1-30	*0.09	0.014938
	1-45	*0.0943333	0.014938
	1-60	*0.097	0.014938
	2-15	*0.0623333	0.014938
	2-30	*0.083	0.014938

	2-45	*0.0873333	0.014938
	2-60	*0.09	0.014938
	15-30	*0.0206667	0.014938
	15-45	*0.025	0.014938
	15-60	*0.0276667	0.014938
	30-45	0.00433333	0.014938
	30-60	0.007	0.014938
	45-60	0.00266667	0.014938
150 mg/ml	0-1	0.0	0.0508542
	0-2	0.00766667	0.0508542
	0-15	*0.065	0.0508542
	0-30	*0.0706667	0.0508542
	0-45	*0.108667	0.0508542
	0-60	*0.122333	0.0508542
	1-2	0.00766667	0.0508542
	1-15	*0.065	0.0508542
	1-30	*0.0706667	0.0508542
	1-45	*0.108667	0.0508542
	1-60	*0.122333	0.0508542
	2-15	*0.0573333	0.0508542
	2-30	*0.063	0.0508542
	2-45	*0.101	0.0508542
	2-60	*0.114667	0.0508542
	15-30	0.00566667	0.0508542
	15-45	0.0436667	0.0508542
	15-60	*0.0573333	0.0508542
	30-45	0.038	0.0508542
	30-60	*0.0516667	0.0508542
	45-60	0.0136667	0.0508542
Concentrations	Time Contrast	Mean Difference	Limits
200 mg/ml	0-1	0.000666667	0.0376894
	0-2	0.00233333	0.0376894
	0-15	*0.0793333	0.0376894
	0-30	*0.091	0.0376894
	0-45	*0.108	0.0376894
	0-60	*0.118667	0.0376894
	1-2	0.00166667	0.0376894
	1-15	*0.0786667	0.0376894
	1-30	*0.0903333	0.0376894
	1-45	*0.107333	0.0376894
	1-60	*0.118	0.0376894
	2-15	*0.077	0.0376894
	2-30	*0.0886667	0.0376894
	2-45	*0.105667	0.0376894

	2-60	*0.116333	0.0376894
	15-30	0.0116667	0.0376894
	15-45	0.0286667	0.0376894
	15-60	*0.0393333	0.0376894
	30-45	0.017	0.0376894
	30-60	0.0276667	0.0376894
	45-60	0.0106667	0.0376894

* denotes a statistically significant difference at p value <0.05

Methanol extract

Concentrations	Time Contrast	Mean Difference	Limits
20 mg/ml	0-1	0.001	0.0482504
	0-2	0.005	0.0482504
	0-15	0.019	0.0482504
	0-30	0.0243333	0.0482504
	0-45	0.0453333	0.0482504
	0-60	*0.0493333	0.0482504
	1-2	0.004	0.0482504
	1-15	0.018	0.0482504
	1-30	0.0233333	0.0482504
	1-45	0.0443333	0.0482504
	1-60	*0.0483333	0.0482504
	2-15	0.014	0.0482504
	2-30	0.0193333	0.0482504
	2-45	0.0403333	0.0482504
	2-60	0.0443333	0.0482504
60 mg/ml	15-30	0.00533333	0.0482504
	15-45	0.0263333	0.0482504
	15-60	0.0303333	0.0482504
	30-45	0.021	0.0482504
	30-60	0.025	0.0482504
	45-60	0.004	0.0482504
	0-1	0.000666667	0.00656358
	0-2	0.002	0.00656358
	0-15	0.003	0.00656358
	0-30	0.00466667	0.00656358
	0-45	*0.0113333	0.00656358
	0-60	*0.0826667	0.00656358
	1-2	0.00133333	0.00656358
	1-15	0.00233333	0.00656358
	1-30	0.004	0.00656358
1-45	*0.0106667	0.00656358	
1-60	*0.082	0.00656358	

	2-15	0.001	0.00656358
	2-30	0.00266667	0.00656358
	2-45	*0.00933333	0.00656358
	2-60	*0.0806667	0.00656358
	15-30	0.00166667	0.00656358
	15-45	*0.00833333	0.00656358
	15-60	*0.0796667	0.00656358
	30-45	*0.00666667	0.00656358
	30-60	*0.078	0.00656358
	45-60	*0.0713333	0.00656358
80 mg/ml	0-1	0.003	0.0576725
	0-2	0.009	0.0576725
	0-15	0.0346667	0.0576725
	0-30	0.0433333	0.0576725
	0-45	0.0513333	0.0576725
	0-60	*0.075	0.0576725
	1-2	0.006	0.0576725
	1-15	0.0316667	0.0576725
	1-30	0.0403333	0.0576725
	1-45	0.0483333	0.0576725
	1-60	*0.072	0.0576725
	2-15	0.0256667	0.0576725
	2-30	0.0343333	0.0576725
	2-45	0.0423333	0.0576725
	2-60	*0.066	0.0576725
	15-30	0.00866667	0.0576725
	15-45	0.0166667	0.0576725
	15-60	0.0403333	0.0576725
	30-45	0.008	0.0576725
	30-60	0.0316667	0.0576725
	45-60	0.0236667	0.0576725
100 mg/ml	0-1	0.00366667	0.00693151
	0-2	*0.012	0.00693151
	0-15	*0.016	0.00693151
	0-30	*0.0216667	0.00693151
	0-45	*0.034	0.00693151
	0-60	*0.058	0.00693151
	1-2	*0.00833333	0.00693151
	1-15	*0.0123333	0.00693151
	1-30	*0.018	0.00693151
	1-45	*0.0303333	0.00693151
	1-60	*0.0543333	0.00693151
	2-15	0.004	0.00693151
	2-30	*0.00966667	0.00693151
	2-45	*0.022	0.00693151

	2-60	*0.046	0.00693151
	15-30	0.00566667	0.00693151
	15-45	*0.018	0.00693151
	15-60	*0.042	0.00693151
	30-45	*0.0123333	0.00693151
	30-60	*0.0363333	0.00693151
	45-60	*0.024	0.00693151
150 mg/ml	0-1	0.00766667	0.0269786
	0-2	0.022	0.0269786
	0-15	*0.098	0.0269786
	0-30	*0.124	0.0269786
	0-45	*0.143667	0.0269786
	0-60	*0.155667	0.0269786
	1-2	0.0143333	0.0269786
	1-15	*0.0903333	0.0269786
	1-30	*0.116333	0.0269786
	1-45	*0.136	0.0269786
	1-60	*0.148	0.0269786
	2-15	*0.076	0.0269786
	2-30	*0.102	0.0269786
	2-45	*0.121667	0.0269786
	2-60	*0.133667	0.0269786
	15-30	0.026	0.0269786
	15-45	*0.0456667	0.0269786
	15-60	*0.0576667	0.0269786
	30-45	0.0196667	0.0269786
	30-60	*0.0316667	0.0269786
	45-60	0.012	0.0269786

* denotes a statistically significant difference at p value <0.05

Hot aqueous extract

Concentrations	Time Contrast	Mean Difference	Limits
20 mg/ml	0-1	0.0	0.010535
	0-2	0.00166667	0.010535
	0-15	*0.0106667	0.010535
	0-30	*0.0133333	0.010535
	0-45	*0.0143333	0.010535
	0-60	*0.014	0.010535
	1-2	0.00166667	0.010535
	1-15	*0.0106667	0.010535
	1-30	*0.0133333	0.010535

	1-45	*0.0143333	0.010535
	1-60	*0.014	0.010535
	2-15	0.009	0.010535
	2-30	*0.0116667	0.010535
	2-45	*0.0126667	0.010535
	2-60	*0.0123333	0.010535
	15-30	0.00266667	0.010535
	15-45	0.00366667	0.010535
	15-60	0.00333333	0.010535
	30-45	0.001	0.010535
	30-60	0.000666667	0.010535
	45-60	-0.000333333	0.010535
50 mg/ml	0-1	0.000333333	0.0135864
	0-2	0.00266667	0.0135864
	0-15	*0.028	0.0135864
	0-30	*0.0386667	0.0135864
	0-45	*0.0476667	0.0135864
	0-60	*0.0513333	0.0135864
	1-2	0.00233333	0.0135864
	1-15	*0.0276667	0.0135864
	1-30	*0.0383333	0.0135864
	1-45	*0.0473333	0.0135864
	1-60	*0.051	0.0135864
	2-15	*0.0253333	0.0135864
	2-30	*0.036	0.0135864
	2-45	*0.045	0.0135864
	2-60	*0.0486667	0.0135864
	15-30	0.0106667	0.0135864
	15-45	*0.0196667	0.0135864
	15-60	*0.0233333	0.0135864
	30-45	0.009	0.0135864
	30-60	0.0126667	0.0135864
	45-60	0.00366667	0.0135864
100 mg/ml	0-1	0.000666667	0.0140306
	0-2	0.00533333	0.0140306
	0-15	*0.048	0.0140306
	0-30	*0.0723333	0.0140306
	0-45	*0.0903333	0.0140306
	0-60	*0.1	0.0140306
	1-2	0.00466667	0.0140306
	1-15	*0.0473333	0.0140306
	1-30	*0.0716667	0.0140306
	1-45	*0.0896667	0.0140306
	1-60	*0.0993333	0.0140306

	2-15	*0.0426667	0.0140306
	2-30	*0.067	0.0140306
	2-45	*0.085	0.0140306
	2-60	*0.0946667	0.0140306
	15-30	*0.0243333	0.0140306
	15-45	*0.0423333	0.0140306
	15-60	*0.052	0.0140306
	30-45	*0.018	0.0140306
	30-60	*0.0276667	0.0140306
	45-60	0.00966667	0.0140306
150 mg/ml	0-1	0.000333333	0.0349011
	0-2	0.007	0.0349011
	0-15	*0.066	0.0349011
	0-30	*0.1	0.0349011
	0-45	*0.119333	0.0349011
	0-60	*0.129333	0.0349011
	1-2	0.00666667	0.0349011
	1-15	*0.0656667	0.0349011
	1-30	*0.0996667	0.0349011
	1-45	*0.119	0.0349011
	1-60	*0.129	0.0349011
	2-15	*0.059	0.0349011
	2-30	*0.093	0.0349011
	2-45	*0.112333	0.0349011
	2-60	*0.122333	0.0349011
	15-30	0.034	0.0349011
	15-45	*0.0533333	0.0349011
	15-60	*0.0633333	0.0349011
	30-45	0.0193333	0.0349011
	30-60	0.0293333	0.0349011
	45-60	0.01	0.0349011
200 mg/ml	0-1	0.000666667	0.0128914
	0-2	0.00266667	0.0128914
	0-15	*0.053	0.0128914
	0-30	*0.071	0.0128914
	0-45	*0.075	0.0128914
	0-60	*0.076	0.0128914
	1-2	0.002	0.0128914
	1-15	*0.0523333	0.0128914
	1-30	*0.0703333	0.0128914
	1-45	*0.0743333	0.0128914
	1-60	*0.0753333	0.0128914
	2-15	*0.0503333	0.0128914
	2-30	*0.0683333	0.0128914
	2-45	*0.0723333	0.0128914

	2-60	*0.0733333	0.0128914
	15-30	*0.018	0.0128914
	15-45	*0.022	0.0128914
	15-60	*0.023	0.0128914
	30-45	0.004	0.0128914
	30-60	0.005	0.0128914
	45-60	0.001	0.0128914

Polysaccharides extract

Concentrations	Time Contrast	Mean Difference	Limits
20 mg/ml	0-1	0.0	0.0118033
	0-2	0.005	0.0118033
	0-15	0.00833333	0.0118033
	0-30	*0.015	0.0118033
	0-45	*0.0226667	0.0118033
	0-60	*0.0246667	0.0118033
	1-2	0.005	0.0118033
	1-15	0.00833333	0.0118033
	1-30	*0.015	0.0118033
	1-45	*0.0226667	0.0118033
	1-60	*0.0246667	0.0118033
	2-15	0.00333333	0.0118033
	2-30	0.01	0.0118033
	2-45	*0.0176667	0.0118033
	2-60	*0.0196667	0.0118033
	15-30	0.00666667	0.0118033
15-45	*0.0143333	0.0118033	
15-60	*0.0163333	0.0118033	
30-45	0.00766667	0.0118033	
30-60	0.00966667	0.0118033	
45-60	0.002	0.0118033	
50 mg/ml	0-1	0.000333333	0.0189037
	0-2	0.000666667	0.0189037
	0-15	0.00666667	0.0189037
	0-30	0.009	0.0189037
	0-45	0.0143333	0.0189037
	0-60	*0.0236667	0.0189037
	1-2	0.000333333	0.0189037
	1-15	0.00633333	0.0189037
	1-30	0.00866667	0.0189037
	1-45	0.014	0.0189037
	1-60	*0.0233333	0.0189037

	2-15	0.006	0.0189037
	2-30	0.00833333	0.0189037
	2-45	0.0136667	0.0189037
	2-60	*0.023	0.0189037
	15-30	0.00233333	0.0189037
	15-45	0.00766667	0.0189037
	15-60	0.017	0.0189037
	30-45	0.00533333	0.0189037
	30-60	0.0146667	0.0189037
	45-60	0.00933333	0.0189037
100 mg/ml	0-1	0.000666667	0.0292061
	0-2	0.00433333	0.0292061
	0-15	0.0136667	0.0292061
	0-30	0.0153333	0.0292061
	0-45	0.0226667	0.0292061
	0-60	0.0226667	0.0292061
	1-2	0.00366667	0.0292061
	1-15	0.013	0.0292061
	1-30	0.0146667	0.0292061
	1-45	0.022	0.0292061
	1-60	0.022	0.0292061
	2-15	0.00933333	0.0292061
	2-30	0.011	0.0292061
	2-45	0.0183333	0.0292061
	2-60	0.0183333	0.0292061
	15-30	0.00166667	0.0292061
	15-45	0.009	0.0292061
	15-60	0.009	0.0292061
	30-45	0.00733333	0.0292061
	30-60	0.00733333	0.0292061
	45-60	0.0	0.0292061
150 mg/ml	0-1	0.000666667	0.0120785
	0-2	0.001	0.0120785
	0-15	0.00866667	0.0120785
	0-30	0.011	0.0120785
	0-45	*0.0146667	0.0120785
	0-60	*0.0213333	0.0120785
	1-2	0.000333333	0.0120785
	1-15	0.008	0.0120785
	1-30	0.0103333	0.0120785
	1-45	*0.014	0.0120785
	1-60	*0.0206667	0.0120785
	2-15	0.00766667	0.0120785
	2-30	0.01	0.0120785
	2-45	*0.0136667	0.0120785
	2-60	*0.0203333	0.0120785

	15-30	0.00233333	0.0120785
	15-45	0.006	0.0120785
	15-60	*0.0126667	0.0120785
	30-45	0.00366667	0.0120785
	30-60	0.0103333	0.0120785
	45-60	0.00666667	0.0120785
200 mg/ml	0-1	0.000333333	0.00815146
	0-2	0.001	0.00815146
	0-15	0.007	0.00815146
	0-30	*0.011	0.00815146
	0-45	*0.019	0.00815146
	0-60	*0.0203333	0.00815146
	1-2	0.000666667	0.00815146
	1-15	0.00666667	0.00815146
	1-30	*0.0106667	0.00815146
	1-45	*0.0186667	0.00815146
	1-60	*0.02	0.00815146
	2-15	0.006	0.00815146
	2-30	*0.01	0.00815146
	2-45	*0.018	0.00815146
	2-60	*0.0193333	0.00815146
	15-30	0.004	0.00815146
	15-45	*0.012	0.00815146
	15-60	*0.0133333	0.00815146
	30-45	0.008	0.00815146
	30-60	*0.00933333	0.00815146
	45-60	0.00133333	0.00815146

* denotes a statistically significant difference at p value <0.05

Concentration	Dichloromethane	Ethanol	Methanol	Polysaccharides	Hot aqueous
20	0.000	0.000	-	0.002	0.000
50	0.003	0.002	0.004	0.009	0.000
60	-	-	0.071	-	-
80	-	-	0.024	-	-
100	0.011	0.003	0.024	0.000	0.001
150	0.008	0.013	0.012	0.007	0.010
200	0.008	0.010	-	0.001	0.001

Table of absorbances which reaches steady state during scavenging of DPPH radicals (45 minutes). Results represented by absorbance in mean values of triplicate for each *Auricularia auricula-judae* fresh fruitbodies extracts

(2) One-Way ANOVA to compare increase in absorbance values to determine concentration needed to reach the steady state during ferric reducing power activity.

Comparison of FRAP value in between different concentration for ethanol extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	0.571667 ^b	X
10 mg/ml	3	0.993333 ^c	X
15 mg/ml	3	1.14767 ^d	X
20 mg/ml	3	1.20833 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean difference	(+/-) Limits
0 - 5	*0.571667	0.020572
0 - 10	*0.993333	0.020572
0 - 15	*1.14767	0.020572
0 - 20	*1.20833	0.020572
5 - 10	*0.421667	0.020572
5 - 15	*0.576	0.020572
5 - 20	*0.636667	0.020572
10 - 15	*0.154333	0.020572
10 - 20	*0.215	0.020572
15 - 20	*0.0606667	0.020572

* denotes a statistically significant difference.

Comparison of FRAP value in between different concentration for methanol extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	0.594333 ^b	X
10 mg/ml	3	1.05667 ^c	X
15 mg/ml	3	1.26 ^d	X
20 mg/ml	3	1.463 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean differences	(+/-) Limits
0 - 5	*0.594333	0.0596248
0 - 10	*1.05667	0.0596248
0 - 15	*1.26	0.0596248
0 - 20	*1.463	0.0596248
5 - 10	*0.462333	0.0596248
5 - 15	*0.665667	0.0596248
5 - 20	*0.868667	0.0596248
10 - 15	*0.203333	0.0596248
10 - 20	*0.406333	0.0596248
15 - 20	*0.203	0.0596248

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

Comparison of FRAP value in between different concentration for dichloromethane extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	0.419667 ^b	X
10 mg/ml	3	0.927667 ^c	X
15 mg/ml	3	1.01743 ^d	X
20 mg/ml	3	1.13533 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean differences	(+/-) Limits
0 - 5	*0.419667	0.0513297
0 - 10	*0.927667	0.0513297
0 - 15	*1.01743	0.0513297
0 - 20	*1.13533	0.0513297
5 - 10	*0.508	0.0513297
5 - 15	*0.597767	0.0513297
5 - 20	*0.715667	0.0513297
10 - 15	*0.0897667	0.0513297
10 - 20	*0.207667	0.0513297
15 - 20	*0.1179	0.0513297

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

Comparison of FRAP value in between different concentration for hot aqueous extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	1.65833 ^b	X
10 mg/ml	3	1.70933 ^c	X
15 mg/ml	3	1.857 ^d	X
20 mg/ml	3	1.91263 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean difference	Limits
0 - 5	*1.65833	0.0362302
0 - 10	*1.70933	0.0362302
0 - 15	*1.857	0.0362302
0 - 20	*1.91263	0.0362302
5 - 10	*0.051	0.0362302
5 - 15	*0.198667	0.0362302
5 - 20	*0.2543	0.0362302
10 - 15	*0.147667	0.0362302
10 - 20	*0.2033	0.0362302
15 - 20	*0.0556333	0.0362302

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

Comparison of FRAP value in between different concentration for polysaccharides extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	0.078 ^b	X
10 mg/ml	3	0.24 ^c	X
15 mg/ml	3	0.462333 ^d	X
20 mg/ml	3	0.493667 ^d	X

4 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean difference	Limits
0 - 5	*0.078	0.0579241
0 - 10	*0.24	0.0579241
0 - 15	*0.462333	0.0579241
0 - 20	*0.493667	0.0579241
5 - 10	*0.162	0.0579241
5 - 15	*0.384333	0.0579241
5 - 20	*0.415667	0.0579241
10 - 15	*0.222333	0.0579241
10 - 20	*0.253667	0.0579241
15 - 20	0.0313333	0.0579241

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

Comparison of FRAP value in between different concentration for butylated hydroxyanisole (BHA) extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	2.53922 ^b	X
10 mg/ml	3	2.68167 ^c	X
15 mg/ml	3	2.72022 ^c	X
20 mg/ml	3	2.74911 ^c	X

3 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean difference	Limits
0 - 5	*2.53922	0.080282
0 - 10	*2.68167	0.080282
0 - 15	*2.72022	0.080282
0 - 20	*2.74911	0.080282
5 - 10	*0.142444	0.080282
5 - 15	*0.181	0.080282
5 - 20	*0.209889	0.080282
10 - 15	0.0385557	0.080282
10 - 20	0.0674443	0.080282
15 - 20	0.0288887	0.080282

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

Comparison of FRAP value in between different concentration for ascorbic acid extract of *A. auricula-judae* fresh fruitbodies

Concentration	Count	Mean	Homogeneous Groups
0 mg/ml	3	0.0 ^a	X
5 mg/ml	3	1.93256 ^b	X
10 mg/ml	3	1.99544 ^{bc}	XX
15 mg/ml	3	2.00811 ^{bc}	XX
20 mg/ml	3	2.155 ^c	X

3 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Concentration contrast	Mean difference	Limits
0 - 5	*1.93256	0.197984
0 - 10	*1.99544	0.197984
0 - 15	*2.00811	0.197984
0 - 20	*2.155	0.197984
5 - 10	0.0628887	0.197984
5 - 15	0.0755543	0.197984
5 - 20	*0.222444	0.197984
10 - 15	0.0126657	0.197984
10 - 20	0.159556	0.197984
15 - 20	0.14689	0.197984

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

(3) The Multiple Range Test to compare the total yield (percentage) in between different extracts of *A. auricula-judae* fresh fruitbodies.

Concentration	Count	Mean	Homogeneous Groups
Methanol	3	0.057 ^a	X
Ethanol	3	0.071 ^b	X
Dichloromethane	3	0.098 ^c	X
Hot aqueous	3	0.357 ^d	X
Polysaccharides	3	0.968 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Extracts contrast	Mean difference	Limits
Polysaccharide-Hot aqueous	*0.611	0.0
Polysaccharide-Dichloromethane	*0.87	0.0
Polysaccharide-Ethanol	*0.897	0.0
Polysaccharide-Methanol	*0.911	0.0
Hot aqueous-	*0.259	0.0

Dichloromethane		
Hot aqueous- Ethanol	*0.286	0.0
Hot aqueous- Methanol	*0.3	0.0
Dichloromethane-Ethanol	*0.027	0.0
Dichloromethane-Methanol	*0.041	0.0
Ethanol-Methanol	*0.014	0.0

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

(4) The Multiple Range Test to compare the EC_{50} values in between different extracts of *A. auricula-judae* fresh fruitbodies.

Concentration	Count	Mean	Homogeneous Groups
Hot aqueous	3	87.66 ^a	X
Methanol	3	94.07 ^b	X
Ethanol	3	109.53 ^c	X
Dichloromethane	3	122.91 ^d	X
Polysaccharides	3	127.49 ^e	X

5 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Extracts contrast	Mean difference of EC_{50} values	Limits
Hot aqueous- Methanol	*15.46	0.0
Hot aqueous- Ethanol	*13.38	0.0
Hot aqueous- Dichloromethane	*21.87	0.0
Hot aqueous- Polysaccharide	*17.96	0.0
Methanol-Ethanol	*28.84	0.0
Methanol-Dichloromethane	*6.41	0.0
Methanol-Polysaccharides	*33.42	0.0
Ethanol-Dichloromethane	*35.25	0.0
Ethanol-Polysaccharides	*4.58	0.0
Dichloromethane- Polysaccharides	*39.83	0.0

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.

(5) The Multiple Range Test to compare the Total Phenolic Content (TPC) in between different extracts of *Auricularia auricula-judae* fresh fruitbodies.

Concentration	Count	Mean	Homogeneous Groups
Polysaccharides	3	0.923 ^a	X
Dichloromethane	3	1.35333 ^b	X
Ethanol	3	1.59 ^c	X
Methanol	3	1.93333 ^d	X
Hot aqueous	3	56.89 ^e	X
Ascorbic acid	3	932.9 ^f	X
BHA	3	1627.31 ^g	X

7 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. Means with different letters (in superscript) within a column are significantly different ($p < 0.05$)

Extracts contrast	Mean difference of TPC values	(+/-) Limits
Ethanol-Methanol	*-0.343333	0.0170901
Ethanol-Dichloromethane	*0.236667	0.0170901
Ethanol-Hot aqueous	*-55.3	0.0170901
Ethanol-Polysaccharides	*0.667	0.0170901
Ethanol-BHA	*-1625.72	0.0170901
Ethanol-Ascorbic acid	*-931.31	0.0170901
Methanol-Dichloromethane	*0.58	0.0170901
Methanol-Hot aqueous	*-54.9567	0.0170901
Methanol-Polysaccharides	*1.01033	0.0170901
Methanol-BHA	*-1625.37	0.0170901
Methanol-Ascorbic acid	*-930.967	0.0170901
Dichloromethane-Hot aqueous	*-55.5367	0.0170901
Dichloromethane-Polysaccharides	*0.430333	0.0170901
Dichloromethane-BHA	*-1625.95	0.0170901
Dichloromethane-Ascorbic acid	*-931.547	0.0170901
Hot aqueous-Polysaccharides	*55.967	0.0170901
Hot aqueous-BHA	*-1570.42	0.0170901
Hot aqueous-Ascorbic acid	*-876.01	0.0170901
Polysaccharides-BHA	*-1626.38	0.0170901
Polysaccharides-Ascorbic acid	*-931.977	0.0170901
BHA-Ascorbic acid	*694.406	0.0170901

* indicating that these pairs show statistically significant differences at the 95.0% confidence level; $p < 0.05$.