

# Separation and Purification of Active Saponins from *Coriolus versicolor* LH-1

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## ABSTRACT

*Coriolus versicolor* is a common growth of the mushrooms on rotten wood. It contains mainly proteins, polysaccharides, polysaccharide peptides, glucans, lignins, amino acids and many inorganic salts. The products widely known are polysaccharide PSK, an auxiliary drugs to antitumor. Fruiting bodies of *Ganoderma lucidum* in the ganoderma A, B, C, F acid are triterpenes, their physiological activities are in the antioxidant and anti-aging. Some scholars also found triterpenes saponins existed in the *Ganoderma lucidum* fermented medium. *C. Versicolor* LH-1 was supplied professor by Tai-Hao, Xu. *C. Versicolor* saponins were isolated and purified had shown some biological activities. The extracts were purified using resin HP-20 packing column. Five factions were collected. The 5th faction contained the most saponin. Furthermore, it was extracted by using n-butyl alcohol, more saponin was obtained from the n-butyl alcohol layer. The biological activities, included DPPH scavenging radical, hydroxyl scavenging radical and  $\alpha$ -glucosidase inhibition. The more saponin the more biological activities were obtained in this case. The n-butyl alcohol layer was further separated by DEAE-Sephrose CL-6B column. Two fractions were collected and full wavelength scanned by UV photometry graph. Their molecular weights were calculated by using HPLC with PolySep-GFC-P3000 column and RI detection. The functional groups were analyzed by using FT-IR. The results showed these two factions were triterpene saponin. The second factions also contained (1 $\rightarrow$ 3)- $\beta$ -D-glucan. They are potentially used for health food.

Keywords : *Coriolus versicolor*, saponins, DPPH scavenging radical activity, hydroxyl scavenging radical activity,  $\alpha$ -glucosidase inhibition

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