

Transformation of Gypenoside (*Gynostemma pentaphyllum* saponin) by Enzymes Isolated from *Aspergillus niger*

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Gynostemma pentaphyllum (Thunb.) Makino is a herbal drug which is presently being promoted and sold in Europe as a herbal tea which is "advantageous to one's health and beauty". *G. pentaphyllum* saponins known as gypenoside which exist mainly as dammarane type-triterpene glycosides, important secondary metabolite in *G. pentaphyllum*. The structure of gypenosides is similar to ginsenoside. For example, Gypenoside V (3-O-[β -d-glucopyranosyl-(1 \rightarrow 2)- β -d-glucopyranosyl]-20-O-[β -d-glucopyranosyl-(1-6)- α -l-rhamnopyranosyl-20(S)-protopanaxadiol]) is similar to the proto-panaxadiol type ginsenoside, such as ginsenoside Rb1(3-O-[β -d-glucopyranosyl-(1 \rightarrow 2)- β -d-glucopyranosyl]-20-O-[β -d-glucopyranosyl-(1-6)- α -l-glucopyranosyl-20(S)-protopanaxadiol]).

In this study, we hydrolyzed of gypenoside V and gypenoside XVII(3-O-[β -d-glucopyranosyl]-20-O-[β -d-glucopyranosyl-(1-6)- α -l-glucopyranosyl-20(S)-protopanaxadiol]) by using enzymes produced from microbial and produced various protopanaxadiol-type saponin include ginsenoside F2, C-K. We were confirmed the conversion by using TLC and HPLC.

These result suggest that it is possible for produce to useful product such as minor ginsenoside from *Gynostemma pentaphyllum*.