

Value – added Ontario Ginseng Products

Dr. Robert Bi
(Supervisor: Dr. Jesse Zhu)

Abstract:

To promote the competitiveness Ontario ginseng, we intend to make Ontario ginseng into advanced healthy products to help to increase its domestic market as well as the value of export. We separated the research into three categories: **fine ginseng powder products**, **ginseng aqueous extract products** and **ginseng ethanol extract products**.

As for the **fine ginseng powder products**, Ontario ginseng was ground into fine powders by jet mill. In vitro dissolution tests were applied to monitor the quality of powders. Ginseng powders with suitable particle size were pressed into **ginseng chewable tablets**.

Ginseng aqueous extract was made into various dosage forms. First, polymers were added to the ginseng water extract and three different gels were obtained. Among them, there was a **regular gel** with a very low polymer concentration, and two **thermal-sensitive gel** which could transform from solid (or liquid) state at room temperature to liquid (or solid) state at body temperature. Second, ginseng water extract was spray dried into powders and made into **regular tablets and chewable tablets**. Dissolution tests showed that they have higher ginsenosides concentration than their counterparts bought from China.

Ginseng ethanol extract, which demonstrated different pharmacological effects to aqueous extract, was spray dried into powders and processed into **regular tablets, chewable tablets, effervescent tablets and dispersible tablets**. The first two products contain more ginsenosides than the latter. Dissolution tests showed that dispersible and chewable tablets could reach their maximum release within 5 minutes, but it took regular and chewable tablets up to 30 minutes to release most of the ginsenosides in them.