The Extraction of Glabridin from Liquorice (Glycyrrhiza glabra) Using Supercritical CO₂

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Extraction of glabridin from Liquorice(Glycyrrhiza glabra) was performed using a supercritical carbon dioxide extraction system. The extraction conditions were $40 \sim 80\,^{\circ}\text{C}$ of temperature and $260 \sim 420 \text{bar}$ of pressure. Extracted glabridin was analyzed by high performance liquid chromatography (HPLC). At these operating conditions, Glabridin was not extracted with pure carbon dioxide. In order to increase extracted amount glabridin methanol and ethanol were used as a modifier. In consequence, methanol was found to be more effective modifier than ethanol. The extraction efficiency of glabridin was increased with the increase of the ratio of methanol in CO2. The extracted amount of glabridin were increased according to increased pressure at the range of $260 \sim 420 \text{bar}$.