

عنوان مقاله:

Separation and Purification of Galegine using Column Chromatography followed by Molecularly Imprinted Polymer Technique

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خلاصه مقاله:

Galega officinalis L. (Papilionaceae) is a native to southeastern Europe that is used in the treatment of various diseases including diabetes. The extract of this plant contains many effective compounds such as Galegine that is a guanidine alkaloid. In this research, column chromatography with a molecularly imprinted polymer (MIP) technique was used to achieve this valuable material. The extracted components were separated by column chromatography using silica gel as stationary phase. For eluting of components from the Galegine extract, once mobile phase was completely non-polar hexane solvent, and then, the polarity of the solvent was increased until all the remaining components were removed. Finally, 11 fractions were achieved. Thin-layer chromatography (TLC) method was used to identify the isolated components. Then, the Galegine in the extraction fraction was purified using MIP technique. The results showed that the chromatographic separation method led to removing significantly the interfacial compounds. Interestingly, it was resulted that while the column chromatography was priority used from MIP adsorption, the purification and isolation efficiency of Galegine was enhanced up to 17 times compared to using MIP alone.

کلمات کلیدی:

Extracted Galegine, Column chromatography, molecularly imprinted polymer, Isolation

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