Abstract

The present work aimed to magnetize Parkia pendula seeds gum and use it as a matrix for Concanavalin A covalent immobilization. This composite was applied in affinity purification of glycoconjugates. Parkia pendula seeds were hydrated and the gum provenient from the supernatant was precipitated and washed with ethanol and dried. The gum was magnetized in co-precipitation using solutions of Fe $^{2+}$ and Fe $^{3+}$. Matrix activation was accomplished with NaIO$_4$. Magnetized Parkia pendula seeds gum with covalently immobilized Concanavalin A was used as an affinity matrix for the recognition of bovine serum fetuin glycoprotein. Fetuin elution was carried out with a solution of glucose (300mM) and evaluated through SDS-PAGE. The efficiency of lectin immobilization and fetuin purification were 63% and 14%, respectively. These results indicate that the composite produced is a promising magnetic polysaccharide matrix for lectins immobilization. Thus, such system can be applied for affinity purification allowing an easy recovery by magnetic field.

Keywords

Immobilization, magnetization, Parkia pendula seed gum, Concanavalin A.