**Control-release of polyphenol from biodegradable sericin / chitosan/ glucomannan films**
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Ab s t r a c t

Biopolymers including chitosan, silk proteins and glucomannan have been the focal point of many research studies reporting their potential use in new biodegradable films. These films exhibit hydrophobic characteristics with controlling water and gas diffusion. They can be used to control and improve bioactive compound releases. In the present study, silk protein /chitosan/ glucomannan films were obtained by solution casting of blends of Silk protein extract (SE) from cocoons of the tropical silkworm *Antheraea mylitta* , glucomannan (GM) and chitosan (CS). Films from a SE/GM/CH blend were characterized by FTIR and SEM. The sorption properties and tensile mechanical of the films were evaluated. The films were also examined to determine the release properties of the polyphenol.

 Keyword : silk protein, glucomannan, chitosan, polyphenol