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Development and characterization of seed gums from Cassia fistula as disintegrating agent for fast disintegrating Thai cordial tablet

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Crude seed gum and their carboxymethyl derivatives from Cassia fistula seed was developed and characterized to apply as the pharmaceutical disintegrant in fast disintegrating Thai cordial tablet. The chemical structure of crude gum was chemically modified via carboxymethylation. Degree of substitution (DS) of carboxymethylated gums was determined. Carboxymethylated gums with minimum and maximum DS values were chosen for further application. IR absorption spectra of gum samples were observed to verify their chemical structure changes. In physical properties, the intrinsic viscosity and swelling property of all gum samples were evaluated. The results showed that carboxymethylated gums had higher intrinsic viscosity than those of crude gum. Moreover, they could swell and be soluble in cold water better than those of crude gums. In conclusion, the modified gums from both plants could provide higher hardness and be better used than that crude gums for fast disintegrating Thai cordial tablet. However, this is a preliminary assessment to expressing pharmaceutical application possibility of these gums as disintegrants, diluents and drug release controlling agents.

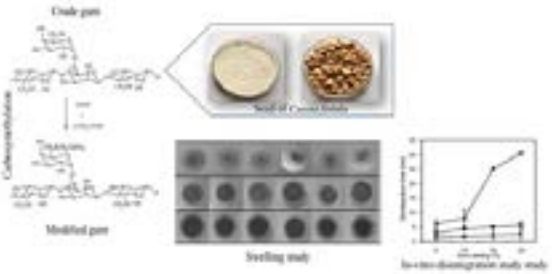

Figure 1. Gum modification method and physical evaluation the prepared tablet

Biography

Kampanart Huanbutta has his expertise in drug delivery system and application of polymer in pharmaceutical dosage forms. He graduated from Faculty of Pharmacy, Silpakorn University, Thailand. After that, he received Postdoctoral Scholarship from Erasmus Mundus to conduct research concerning anticancer drug delivery system in University of Porto, Portugal. Now he is working at Faculty of Pharmaceutical Sciences, Burapha University as an Assistant Dean for academic affair and post-graduation study. He also works as Secretary General of Pharmaceutical Association of Thailand under Royal Patronage. He has published research and review articles in international journals for more than 20 articles.

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