عنوان مقاله:

Influence of Concentration of Salvia Macrosiphon Seed on the Properties of Edible Film from starch

محل انتشار:

دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال: 1395)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

In this study, we investigated the potential of Salvia macrosiphon seed mucilage (SSM) as a new source for preparation of edible films and determined the mechanical, barrier and thermal properties. Edible films were cast from heated aqueous solutions of corn starch (5% w/w) and Salvia macrosiphon 5%, 10%, 20%, and 30% w/w). By increasing salvia macrosiphon to 30% w/w concentration, ultimate tensile strength enhanced to 22 MPa, and elongation increased from 2.48% to 6.5%. The addition of salvia macrosiphon also improved gas barrier properties of the films. In films containing 2% salvia macrosiphon, WVP decreased from 6.69×10−7g/m.h.Pa to 1.10×10−7g/m.h.Pa and oxygen permeability declined to13.68 ml.day/m2. This study revealed that the new antimicrobial edible film had a good potential to be used for packaging of a wide range of food products.

کلمات کلیدی:

Antimicrobial film, Salvia macrosiphon, starch, Thermal properties, Mechanical properties