

14th Food Engineering Conference

November 28-29, 2016 Melbourne, Australia



Marek Sikora

University of Agriculture in Krakow, Poland

Polysaccharide hydrocolloids as the stabilizers of starch pastes and gels

Non-starchy polysaccharide hydrocolloids (NPH), such as xanthan, guar and locust bean gums were tested as the stabilizers of the normal (NPS) and waxy (WPS) potato pastes and gels. NPS and WPS pastes without and with an addition of NPH were studied in terms of the flow curves and hysteresis loops areas, and the thixotropic properties were determined by the in-shear structural recovery as well as by apparent viscosity at constant shear of 50 s⁻¹ (with and without pre-shearing) tests. Susceptibility to retrogradation of two NPS (with various amylose content) and WPS upon an addition of NPH were also studied. For this purpose the viscoelastic and textural properties as well as syneresis of the chilled samples, stored up to 90 days were measured. It was stated that both the rheological and storage stability of the samples depended on the starch properties (amylose content and concentration) as well as on the quality and amount of NPH added. In order to keep the rheological stability, an important factor was the temperature of the samples' preparation; while in order to keep the storage stability, the time of storage was the main factor.

Biography

Marek Sikora is currently working as a Researcher at University of Agriculture in Krakow, Poland. He has extended his valuable service for many years and has been a recipient of many award and grants. His experience includes various programs, contributions and participation in different events for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

rrikora@cyf-kr.edu.pl

Notes: