دوشنبه 27 آذر 1402 - 11:55

وبینار هفته پژوهش و فناوری-آذرماه 1402

سخنران: دکتر یوسفی

Research Week Event at the **University of Bonab**

Title of Presentation: Incorporation of Lepidium Perfoliatum Seed gum into Wheat Starch Affects its Physicochemical, Viscoelastic, Pasting and Freeze-Thaw Syneresis Properties

Speaker: Dr. Alireza Yousefi
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University of Bonab, Iran.
Guest Researcher at the Department of Plant-based Foods
University of Hohenheim, Germany.

Abstract: It has recently been discovered that the gum extracted from Lepidium perfoliatum seeds has thickening and stabilizing properties that make it suitable for use in food and pharmaceutical systems. In this presentation, we will explore the impact of incorporating Lepidium perfoliatum seed gum (LPSG) into wheat starch (WS) on its functional properties. In brief, it was found that the onset and peak temperatures of the LPSG-rich mixtures increased, while the enthalpy decreased compared to WS. The in-shear structural recovery test showed that the rate of recovery increased with an increasing LPSG ratio. The temperature sweep test demonstrated that the 1/9 ratio had the highest final viscosity and the lowest relative breakdown. Applying 1 to 5 freeze-thaw cycles resulted in a decrease in syneresis for the 1/9 mixing ratio in comparison to WS, respectively. The incorporation of LPSG into WS resulted in higher static and dynamic magnitudes of yield stress, as well as an increase in particle size when compared to WS.

Date: Monday, 18th Dec. 2023
Time: 12-13 PM (IRST)
9:30 - 10:30 AM (UTC)

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