On the valorization of agro resource of Tizi Ouzou: Extraction for pectin from melon rinds and their application

Benahmed Djilali Adiba, Benaouda Nour-Eddine, Chemoul Tamazouzt, Kal Samia and Ghendouzi Sonia
University of Mouloud Mammeri of Tizi Ouzou, Algeria

The main objective of this work was to study the valorization of agricultural wastes and byproducts of food in our country; we opted for extracting pectin from melon rinds. Pectins are a very useful class of active ingredients and are identified as multifunctional compounds with several pharmacological activities. Pectin yields obtained using aluminum sulfate and aluminum chloride as precipitating agents is 6.916% and 9.166% respectively. The pectins IR spectra obtained revealed that these pectins have two broad absorption bands at 3400 cm⁻¹ and 3396 cm⁻¹ which seems to correspond to the type of vibration ν elongation of the hydroxyl group (OH). The presence of peaks at about 1740 cm⁻¹ and 1269 cm⁻¹ appears to correspond to the C=O bonds of the uronic acids and esters. The bands found in the pectins extracted with aluminum sulfate (1743 cm⁻¹) and (1239.15 cm⁻¹) can be attributed to sugars or non-esterified acid that especially are found in pectins. Pectins precipitated by aluminum sulfate showed a microstructure similar to those of commercial pectins. These substances could be a primary source for the development of new products for many industries.

Biography
Benahmed Djilali Adiba has completed his PhD from Algeria University of Boumerdes. He is currently a Teacher at the University of Mouloud Mammeri of Tizi-Ouzou.
adbiba.benahmed@yahoo.fr

Notes: