

# Studies on Pectin Content in Peel of Sikkim Mandarin

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**Abstract**—Sikkim mandarin (*Citrus reticulata* Blanco) is one of the most prized and remunerative cash crop for the farmers of Sikkim. It is grown organically in the state and mainly exported or processed for various products. After the extraction of juice in the processing industry, citrus peel accounts for huge waste, which is otherwise used for extraction of industrially valuable compound like pectin. Extraction of pectin from organically grown mandarin have added advantages if it is to be used in food industries.

*Pectin is a chemical substance which occurs in the primary cell wall of plants and is involved in adhesion of cell to cell. It is composed of D-galacturonic acid which esterifies with methanol and is being used commercially in industries for gelling purpose. Citrus fruit peel waste resulted into high quality product.*

*Analysis of pectin is done from the residue remain after oil extraction from Socoplus apparatus in organically grown Sikkim mandarin collected at Tadong Gangtok. Pectin content was found to be 50% in powdered peel sample taken and the obtained pectin was characterized for color, solubility in cold and hot water, solubility in cold and hot alkali, equivalent weight, methoxyl content (MeO), moisture content, anhydrouinic acid( AUA), degree of esterification(DE) . The studied pectin was found to be at par with commercially available pectin.*

**Keywords:** peel waste, pectin, oil extraction and characterization of pectin.