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Food properties of sarda and bobby muskmelon and effect of processing on the nutritional properties, polyphenols and antioxidant activity of muskmelon (Cucumis melo.)

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Cucumis melo L. is underutilized fruit of the Reticulates type, usually called muskmelon belongs to the family Cucurbitaceous. In this study two selected varieties of Muskmelon i.e., Sarda and Bobby Muskmelons were taken as sample. All the edible parts as well as the wastage parts from muskmelon are studied. In this study, the wastage as well as nutrition loss through the waste part is observed and different processes are used to preserve the parts of muskmelon and their effect on the parts were studied. Various food properties were determined such as Engineering, Organoleptic, Physico-chemical, Nutritional and Functional Properties. Engineering properties such as Physical (geometric and gravimetric), Frictional, Optical, Textural properties were evaluated of whole fruit and seed. Sarda has shown higher results than Bobby. In case of Organoleptic properties overall rating was 7 for Bobby and 2 for Sarda was given on the basis of appearance, shape, color, aroma, taste, texture and juiciness.

Physicochemical properties of Muskmelon juice of both varieties such were also analyzed. Both the varieties have shown almost similar results. Further effect of processing on Nutritional and Functional properties was studied which includes pigments, proximate composition, Total phenolic content, Total Flavonoid content, Total Antioxidant capacity, Ferric Reducing Power, Tannin content which shows that lyophilization preserve more nutritional and bioactive components than oven dried. Both the varieties have shown significant results. Lastly, wine is developed from muskmelon and a Physico-chemical and Functional property of wine was determined.

Biography

Manpreet Kaur is a post graduate student at I. K. Gujral Punjab Technical University, Punjab, India, pursuing masters of technology in food technology. She has done bachelors (B.Tech) in biotechnology. She has worked on many different academic projects in my bachelors such as algal biodiesel production; food technology and probiotics development; detection and enumeration of various pathogens from various raw materials, finished products, raw materials and environmental samples; verification of qualitative methods; 5-S – sort, straighten, shine, standardize and sustain. In M.Tech she has worked on in silico drug designing and drug development; and engineering properties of legumes. Her recent project for M.Tech dissertation is to study food properties of sarda and bobby muskmelon and effect of processing on the nutritional properties & polyphenols and antioxidant activity of muskmelon (Cucumis melo).

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