

CHARACTERISTICS OF POTATO CHIPS OF DIFFERENT VARIETIES

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Abstract: Moisture content of varieties differed significantly ($p \leq 0.01$) ranging from 78.87 per cent to 84.53 per cent with lowest in Atlanta and thus ranked first. Variety Kufri Khayti (20.93 mg/100g) showed highest dry matter content. Starch of potato tubers and it ranged between 58.32 per cent to 85.67 per cent with highest content in Kufri Khayti and lowest in Kufri Surya. Among the varieties Kufri Pukhraj had lowest reducing sugars (55.13 mg/100g), whereas lowest non reducing and total sugar in J/99-242 with 104.43 mg/100g and 216.10 mg/100g respectively. Compared to control variety, chips prepared from Kufri Khayti found to be more crunchy, possessed firm texture as well as appealing flavour, appearance and overall acceptability. The acceptability scores was highest for potato chips from Kufri Khayti (88.89 %) followed by Kufri Surya (80.44 %). There was a negative relationship between reducing sugar and colour score as well as moisture content and texture score, whereas positive relation between dry matter and sensory parameter.

Keywords: Chemical, Chips, Potato

REFERENCES

Abong, G.O., Okoth, M.W. Imungi, J.K. and Kabira, J.N., (2010). Evaluation of selected Kenya potato cultivars for processing into potato crisps. *Agric. Biol. J.N. America*, 1(5): 886-893.

Anonymous, (1970). Official methods of analysis, 13th edition, Association of official analytical chemists, Washington. DC.

Bohart, G. and Carson, J. (1955). Effects of trace metals, oxygen and light on the glucoseglycine browning reaction. *Nature*, 175: 470-471.

Das, M., Ezekiel, R. and Sekhawat, G.S., (2001). Quality of dehydrated potato chips produced from fresh and heap stored tubers. *J. Indian Potato Assoc.*, 28 (1): 174-175.

Ezekiel, R., Singh, B. and Kumar, D., (2003). A reference chart for potato chip colour for use in India. *J. Indian Potato Assoc.*, 30 (3-4): 259-265.

Ezekiel, R., Verma, S.C., Sukumar, N.P. and Shekhawat, G.S., (1999). A guide to potato processors in India. Central Potato Research Institute, Tech. Bull. No. 49, Shimla, India, pp. 39-41.

Goel, K., A., Kumar, R. and Mann, S., S., (2007). Postharvest management and value addition, Daya Publishing House, New Delhi, pp. 40-43.

Habib, A. T. and Brown, H.D., (1957). Role of reducing sugars and amino acids in browning of potato chips. *Food Technol.*, 11: 85-89.

Kita, A., (2002). The influence of potato chemical composition on crisp texture. *Food chemistry*, 76: 173-179.

Kroner, W. and Volksen, W., (1950). The Potato, Johann Ambrosius Barth, Leipzig, pp.6-18.

Kumar, D., Ezekiel, R. and Khurana, S.M.P., (2003). Effect of location, seasons and cultivar on the processing quality of potatoes. *J. Indian Potato Assoc.*, 30 (3-4): 247-251.

Lisinska, G. and Leszczynski, W., (1989). Potato science and technology, Elsevier Science Publishers Ltd., America, New York, pp. 11-202.

Maga, J.A. and Holm, D.G., (1992). Food Science and Human Nutrition, Elsevier Science Publishers, Amsterdam, pp. 537-41.

Maga, J.A. and Sizer, C.E., (1973). Pyrazines in foods. A review. *J. Agri. Food Chemistry*, 21(1):22-30.

Marwaha, R.S., Kumar, D., Singh, S.V. and Pandey, S.K., (2008). Influence of blanching of potato varieties on chipping quality. *J. Food Sci. Technol.*, 45 (4): 364-367.

Reeve, R.M., Hautala, E. and Weaver, M. L. (1970). Anatomy and compositional variations within potatoes III gross compositional gradients. *American Potato J.*, 47: 148-162.

Sadasivam, S. and Manickham, A., (1992). Biochemical Methods, New age International Publishers, New Delhi, pp. 5-12.

Singh, B. and Ezekiel, R., (2008). Reducing sugar content and chipping quality of tubers of potato cultivars after storage and reconditioning. *Potato J.*, 35 (1-2): 23-30.

Sood, D.R., Kalim, S. and Shilpa, (2008). Biochemical evaluation of potato tubers and peels. *Indian J. Nutr. Dietet.*, 45 : 410-420.

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