## EFFECT OF DRYING METHODS ON ACIDITY AND SUGAR CONTENT OF SAPOTA (MANILKARA ZAPOTA L.)

## Suman Bala\*, Jitender Kumar and Savita Duhan

Department of Botany and Plant Physiology, CCS HAU, Hisar-125004 Email: sumanmalika14@gmail.com

Received-21.01.2017, Revised-24.02.2017

**Abstract:** Sapota (*Manilkara zapota* L.) is a tropical fruit found in several parts of India. Once ripe, it needs to be consumed within a couple of days due to the highly perishable nature of this exquisite fruit variety. Drying is effective method to convert this perishable fruit into stabilised dehydrated products that can be stored for an extended period of time. In this study, influence of solar and oven drying on the quality of sapota fruit was investigated. Acidity and non-reducing sugars increased in sapota pieces dried by different methods of drying during storage upto 90 days. Sapota pieces dried in solar dryer had maximum acidity (0.346%). Total and reducing sugars decreased during storage in both methods of drying. Solar dried sapota powder contained maximum total sugars (35.58%) and minimum reducing sugars (26.27%) whereas minimum total sugar (35.52%) and maximum reducing sugar content (28.58%) was recorded in oven dried sapota on all periods of storage. Sapota dried after cutting in 4 parts had maximum acidity, total and reducing sugars in both methods of drying.

Keywords: Sapota, Acidity, Drying methods, Solar, Oven, Sugars

## **REFERENCES**

**AOAC** (1990). Official Methods of Analysis. Association of Official Analytical Chemists, Washington, D.C.

**Clydesdale, F. M., Lin. Y. D. & Francis, F. J.** (1972). Formation of 2-pyrrolidone-5-carboxylic acid from glutamine during processing and storage of spinach puree. Journal of Food Science. **37(1):** 45-47.

**Fennema, O. R.** (1985). Food Chemistry. New York and Basel: Marcel Dekher Inc.

**Ganjyal, G. M., Hanna, M. A. & Devadattam, D. S. K.** (2003). Processing of zapota (sapodilla): Drying. Journal of Food Science. **68**: 517-520.

Ganjyal, G. M., Hanna, M. A. & Devadattam, D. S. K. (2005). Processing of Sapota (sapodilla): Powdering. Journal of Food Technology. 3(3): 326-330

**Ghorai, K. & Sethi, V.** (1996). Varietal suitability of Amla (Desi and Banarasi) fruits for storage and preservation. Indian Food Packer. **50(1):** 11-18.

**Kumar, S.** (1989). Studies on the Processing of Date Palm Fruits (*Phoenix dactylifera* L.). M.Sc. Thesis, CCS HAU, Hisar. India.

**Kumar, S.** (1989). Studies on the Processing of Date Palm Fruits (*Phoenix dactylifera* L.). M.Sc. Thesis, CCS HAU, Hisar. India.

**Kumari, P.** (2016). Studies on biochemical and antioxidant changes in aonla (*Emblica officinalis* G.)

and its different products during storage. Ph.D Thesis, CCS HAU, Hisar, India.

**Mehta, S.** (1995). Evaluation of different cultivars of Aonla (*Emblica officinalis* G.) for Processing. M.Sc. Thesis, CCS HAU, Hisar. India.

**Paleg, L. G.** (1960). Physiological effect of Gibberellic acid on carbohydrates metabolism and amylase activity of barley endosperm. Plant Physiology. **35:** 293-299.

**Pareek, S. & Kaushik, R. A.** (2012). Effect of drying methods on quality of Indian gooseberry (*Emblica officinalis* Gaertn) powder during storage. Journal of Scientific and Industrial Research. **71:** 727-732.

**Patter, H. E.** (1985). Evaluation of quality of fruits and vegetables. AVI Publishing Company Westport, CT.

**Pragati, Dahiya, S. & Dhawan, S. S.** (2003). Effect of drying methods on nutritional composition of dehydrated aonla fruit (*Emblica officinalis* Gaertn) during storage. Plant Foods for Human Nutrition. **58:** 1-9

**Rao, V. S. & Roy, S. K.** (1980). Studies on dehydration of Mango pulp: Standardization for making Mango sheetleather. Indian Food Packer. **34:** 

**Vijaya, K., Pucho, V. & Gurbai, S. C.** (1997). Evaluation of solar dryer for horticultural produce (B.Tech. Thesis). C.A.E. Raichur College Library.

<sup>\*</sup>Corresponding Author