

SHELF LIFE OF COMPOSITE FLOUR IN DIFFERENT PACKAGING MATERIALS UNDER ACCELERATED CONDITION

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Abstract : “Increasing prevalence of obesity and physical inactivity has led to increase in number of people with diabetes. A composite flour utilizing *ragi* and wheat flour is used to prepare composite flour ratio being 70:30 (Wheat: Finger millet). The composite flour contains fairly good amount protein (10.49%), ash (1.38%) and 251.724 (mg/ 100 g) calcium which shows that the product is nutritionally rich especially in terms of calcium and protein. The fat content (1.5%) is quite low. The storage studies were performed under accelerated condition (89% RH and 40⁰C temp.) using the packaging materials multilayer, LDPE and kraftpaper. The packed samples of composite flour were analyzed after a fixed interval of 10 days for change in moisture, fat, rancidity and colour up to 90 days. After 90 days of storage it was found that multilayer is best and cost economic packaging material for composite flour.”

Keywords : Accelerated condition, Composite flour, Packaging materials

REFERENCES

- Akindahunsi, A.A. and Oboh, G.** (2000). Effect of changes in Relative Humidity on the Storage Stability of Micro-Fungi Fermented Gari. In: Proceedings of 24th Annual Conference of Nigerian Institute of Food Science and Technology. pp. 47-49.
- AOAC,** (1995). Official Methods of Analysis 16th Edn. *J. Assoc. Anal Chem.* **37:** 1-10.
- Awasthi, P. and Mishra, A.** (2004). Dietary constituents: Tips for dietary treatment. *Indian Farmer's Digest.* **28 (9):** 43-44
- Brown, W.E.** (1992). Plastics in Food Packaging: properties design and fabrication. Publisher Marcel Dekker Inc., p. 50.
- Butt, M.S; Nasir, Akhter, M.S. and Sharif, K.** (2004). Effect of packaging on the shelflife of wheat flour. *Int .J. Food safety.***4;** 1-6.
- Dykes, L. and Rooney, L.W.** (2007) *Cereal Foods World,* **52(3),** 105-111.
- FAO** (1972) Sorghum and millets in human nutrition. FAO, Food and Nutrition series. Rome, Italy.
- Fasasi, O.S.** (2003). Effect of Different Packaging Materials on the Chemical Composition of African Breadfruit Seed (*Treculia Africana*) Flour during Storage at Room Temperature. In: Proceedings of 27th Annual Conference of Nigerian Institute of Food Science and Technology. pp. 153-154.
- Greenspan, L.** (1977). Humidity fixed points of binary saturated aqueous solutions. *J. Research National Bureau of Standards (US).* Series A, Physics and Chemistry. **81A:** 89-96.
- Hulse, J.W.; Laing , E.M. and Pearson, O.E.** (1980). Sorghum and the *Millets:* Their Composition and Nutritive Value. Academic Press. pp 27-59.
- Kent, N.L. and Evers, A.D.** (1994). Technology of cereals: an introduction for student of food science and agriculture, 4th edition. Persoman press. Oxford.
- Kirk, S.R. and Sawyer, R.** (1991). Pearson's Composition and Analysis of Foods. Addison-Wesley Longman Ltd. Edinburg Gate, Harlow, England.
- Lorenz, K. and Dilsaver, W.** (1980). Proso millets. Milling characteristics, proximate compotion and nutritive values of flour. *American accociation of cereal chemistry.***57(1):**16-20.
- Popkin, B.M.; Horton S.; Kims S.; Mahal A. and Shuigao J.** (2001) *Nutrition Review,* **59:** 379-90.
- Punjrath, J.S.** (1995). Trends in packaging milk and milk products. *Indian Dairyman.* **17(5):**29-40.
- Pyler, E.J.** (1971). *Baking Science and Technology.* p: 546. Siebel, Chicago.
- Rehman, Z. U. and W. H. Shah** (1999). Biochemical changes in wheat during storage at three temperatures. *Plant Food for Human Nutri.* **54 (2):** 109-117.
- Sindhi R. and Jain S** (2006) *Journal of Food Science and Technology,* **43(2),** 148-150.