Available Online at http://www.journalajst.com

ASIAN JOURNAL OF SCIENCE AND TECHNOLOGY

ISSN: 0976-3376

Asian Journal of Science and Technology
Vol. 08, Issue, 12, pp.7168-7169, December, 2017

RESEARCH ARTICLE

ENHANCEMENT OF NORMAL FLOUR BY USING DIETRY FIBRE & THEIR STANDERIZATION

[1]Shikha Singh and [2]Neetu Singh

[1]Student, School for Home Science, Babasaheb Bhimrao Ambedker University (A central University) Vidya Vihar, Rae Bareli Road Lucknow-226025, U.P., India
[2]Assistant professor, School for Home Science, Babasaheb Bhimrao Ambedker University (A central University) Vidya Vihar, Rae Bareli Road Lucknow-226025, U.P., India

ARTICLE INFO

Article History:
Received 22nd September, 2017
Received in revised form
19th October, 2017
Accepted 11th November, 2017
Published online 30th December, 2017

Key words:
Therapeutic flour,
Rice bran,
Chickpea peel,
Whole wheat flour.

ABSTRACT

In era of increasing life style diseases among people foods are required for better nutritional management. While considering the nutritional management staple foods are important role in day to day life. Now a days fortified flour and blended flour are available in the market. But demand of supply needed more search to fulfil the requirement of people the present study is a noble steps to meet out this problem and also provide better nutritional management or for curing health hazards. Dietary fibre rich flour is developed by the mixing of rice bran, chickpea peel and whole wheat flour in different ratio(s) and better results obtained in the ratio(s) of rice bran, chickpea peel and whole wheat flour in 10:10:80 in the development of fiber rich flour. Which is further supported by the hedonic scale. Developed product was characterised by sensory evaluation & nutritional analysis.

INTRODUCTION

Dietary fiber or roughage is the indigestible portion of food derived from plants. It has two main components: Soluble fiber, which dissolves in water, is readily fermented in the colon into gases and physiologically active by products, and can be prebiotic and viscous. Rice bran, a by-product of rice milling industry is rich in micronutrients like oryzanols, tocopherols, tocotrienols, phytosterols and dietary fibers. Chickpea (Cicer arietinum L.) is an important pulse crop grown and consumed all over the world, especially in the Afro-Asian countries. It is a good source of carbohydrates and protein, and protein quality is considered to be better than other pulses. Chickpea has significant amounts of all the essential amino acids except sulphur-containing amino acids, which can be complemented by adding cereals to the daily diet. Starch is the major storage carbohydrate followed by dietary fibre, oligosaccharides and simple sugars such as glucose and sucrose. Wheat has several medicinal virtues; starch and gluten in wheat provide heat and energy; the inner bran coats, phosphates and other mineral salts; the outer bran, the much-needed roughage the indigestible portion that helps easy movement of bowels; the germ, vitamins B and E; and protein of wheat helps build and repair muscular tissue.

Corresponding author: **Shikha Singh**
Student, School for Home Science, Babasaheb Bhimrao Ambedker University (A central University) Vidya Vihar, Rae Bareli Road Lucknow-226025, U.P., India

The wheat germ, which is removed in the process of refining, is also rich in essential vitamin E, the lack of which can lead to heart disease.

MATERRIAL AND METHODS

Sample size

Ingredient	Sample 1 (10%)	Sample 2 (15%)	Sample 3 (20%)	Sample (control)
T1	10gm	10gm	15gm	100gm
T2	10gm	20gm	20gm	-
T3	80gm	70gm	65gm	-

Where, T1= Rice Bran, T2=.Chickpea Peel, T3= Wheat Flour

Preparation of therapeutic flour blend with Rice bran, chickpea peel, wheat flour

Tools - Rice bran, chickpea peel, and whole wheat, Weighing machine, Meeling machine Container, etc. The preparation of three different variation of one flour product for experiment by Rice bran, chickpea peel and whole wheat flour combination.

RESULTS

Nutritional value of Therapeutic flour

Nutritional Value	Therapeutic flour
	Result
Fibre %	17.79

Source- RFRAC, Lucknow

Fig. 1. Flow chart for the manufacturing of therapeutic flow chart

The dietary fibre content is 17.79 % in Rice bran, chickpea peel and whole wheat flour blended dietary fiber rich flour.

Conclusion

In era increasing life style diseases among people food are required for better nutritional management while considering the nutritional management. staple food are important role in day to day life. Now a days fortified flour & blended flour are available in market but demand of supply needed more search to fulfill the requirement of people. The present study is a nobel step to meet out this problem and also provide better nutritional management or for curing health hazards.

REFERENCES

Ahmad, M., Baba, W.N., Wani, T.A., Gani, A., Gani, A., Shah, U., Wani, S.M. and Masoodi, F.A., 2015. Effect of green tea powder on thermal, rheological & functional properties of wheat flour and physical, nutraceutical & sensory analysis of cookies. *Journal of food science and technology*, *52*(9), pp.5799-5807

Anton, A.A., Ross, K.A., Lukow, O.M., Fulcher, R.G. and Arntfield, S.D., 2008. Influence of added bean flour (Phaseolus vulgaris L.) on some physical and nutritional properties of wheat flour tortillas. *Food Chemistry*, *109*(1), pp.33-41.

EJisha, S., Padmaja, G. and Sajeev, M.S., 2010. NUTRITIONAL AND TEXTURAL STUDIES ON DIETARY FIBER-ENRICHED MUFFINS AND BISCUITS FROM CASSAVA-BASED COMPOSITE FLOURS. *Journal of Food Quality*, *33*(s1), pp.79-99.

Hudson, C.A., Chiu, M.M. and Knuckles, B.E., 1992. Development and characteristics of high-fiber muffins with oat bran, rice bran, or barley fiber fractions. *Cereal foods world (USA)*.

Jensen, M.K., Koh-Banerjee, P., Franz, M., Sampson, L., Grønbæk, M. and Rimm, E.B., 2006. Whole grains, bran, and germ in relation to homocysteine and markers of glycemic control, lipids, and inflammation. *The American journal of clinical nutrition*, *83*(2), pp.275-283.

Jones, D.B. and Divine, J.P., 1944. The Protein Nutritional Value of Soybean, Peanut, and Cottonseed Flours and their Value as Supplements to Wheat Flour. *Journal of Nutrition*, *28*(1), pp.41-

Jensen, M.K., Koh-Banerjee, P., Hu, F.B., Franz, M., Sampson, L., Grønbæk, M. and Rimm, E.B., 2004. Intakes of whole grains, bran, and germ and the risk of coronary heart disease in men. *The American journal of clinical nutrition*, *80*(6), pp.1492-1499

.Kohajdová, Z., Karovičová, J. and Jurasová, M., 2012. Influence of carrot pomac powder on the rheological characteristics of wheat flour dough and on wheat rolls quality. *Acta Scientiarum Polonorum Technologia Alimentaria*, *11*(4), pp.381-387.

LaGrone, L.N., Trehan, I., Meuli, G.J., Wang, R.J., Thakwalakwa, C., Maleta, K. and Manary, M.J., 2012. A novel fortified blended flour, corn-soy blend "plus-plus," is not inferior to lipid-based ready-to-use supplementary foods for the treatment of moderate acute malnutrition in Malawian children. *The American journal of clinical nutrition*, *95*(1), pp.212-219.

Pai, S., Ghugre, P.S. and Udipi, S.A., 2005. Satiety from rice-based, wheat-based and rice–pulse combination preparations. *Appetite*, *44*(3), pp.263-271.

Qureshi, A.A., Sami, S.A. and Khan, F.A., 2002. Effects of stabilized rice bran, its soluble and fiber fractions on blood glucose levels and serum lipid parameters in humans with diabetes mellitus Types I and II. *The Journal of nutritional biochemistry*, *13*(3), pp.175-187

Widyaratne, G.P. and Zijlstra, R.T., 2007. Nutritional value of wheat and corn distiller's dried grain with solubles: Digestibility and digestible contents of energy, amino acids and phosphorus, nutrient excretion and growth performance of grower-finisher pigs. *Canadian Journal of Animal Science*, *87*(1), p.103.

Yeomans, M.R., Leitch, M., Gould, N.J. and Mobini, S., 2008. Differential hedonic, sensory and behavioral changes associated with flavor–nutrient and flavor–flavor learning. *Physiology & Behavior*, *93*(4), pp.798-806.

.Zhou, K., Su, L. and Yu, L., 2004. Phytochemicals and antioxidant properties in wheat bran. *Journal of Agricultural and Food Chemistry*, *52*(20), pp.6108-6114

Renu Sharma et al. *Int. Journal of Engineering Research and Applications* www.ijera.com ISSN : 2248-9622, Vol. 5, Issue 5, (Part -2) May 2015, pp.107-112

Jukanti, A.K., Gaur, P.M., Gowda, C.L.L. and Chibbar, R.N., 2012.Nutritional quality and health benefits of chickpea (Cicer arietinum L.): a review. *British Journal of Nutrition*, *108*(S1), pp.S11-S26.

Salehifar, M. and Fadaei, V., 2011. Comparison of some functional properties and chemical constituents of dietary fibers of Iranian rice bran extracted by chemical and enzymatic methods. *African Journal of Biotechnology*, *10*(80), pp.18528-18531.

Sivashankar, R., S. A. Srinivasan, S. Shankar, R. Rajasekar, R. Naveen Kumar, P. Sathish Kumar. "Review article on wheat flour/wheat bran/wheat husk based bio-composites," *International Journal of Scientific and Research Publications*, Vol.4, No. 4, 2014.

****