

Category	: International Rice Research Conference
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Keyword 1	: Healthy food systems
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Title of Entry	: Rice Based Low-Fat comestible Spread
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Abstract : Food spreads such as margarine and butter are indispensable ingredients in a large variety of baking products. They are used in the home and industry for cooking, baking, sandwiches and numerous food products. Margarine and butter contains as high as 80% of fat by weight. Low fat spread has also been developed but the fat is mainly composed of saturated fats which are produced by hydrogenation of vegetable oils. Saturated fats and trans fat produced during hydrogenation, are considered responsible for increasing total cholesterol and low density lipoprotein cholesterol. Moreover, the process of hydrogenation increases the production cost of the product. In view of the above mentioned points, an attempt was made to develop a product with edible vegetable oil which can be used as substitute of margarine/ butter and the developed product will have fatty acid composition similar to that of vegetable oil. Rice bran oil (RBO) which has been used as source of fat for developing the spread, contains fatty acid composition closure to the recommendation given by WHO- Indian Council of Medical Research, India. The developed contained 45% fat. Other key ingredients of the product are broken rice powder as thickener, and soya lecithin as an emulsifying agent and water. The fat of the spread is comprised of 23.4% saturated fatty acids (SFA), 42.3% monounsaturated fatty acids (MUFA), and 34.26% polyunsaturated fatty acids (PUFA) which is similar to that of RBO. Apart from balanced fatty acid composition, RBO is also a rich source of health promoting compounds, ranging from tocopherols and tocotrienols, to phytosterols and gamma-oryzanol. Gamma-Oryzanol has been shown previously to act as an antioxidant and is also effective at lowering cholesterol. It is an antioxidant nutrient and is also thought to lower blood cholesterol levels. RBO has been shown to protect against lipid per-oxidation in vitro. It exhibits a considerable number of health benefits including cardiovascular protection, the immune system, cancer, neuroendocrinology, digestion and gastritis and osteoporosis. Because of RBO, the developed low fat spread will also have these health promoting properties. Sensory evaluation showed that the developed product is similar to commercially available butter.

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