

Valorisation of Grey Oyster Mushrooms (*Pleurotus sajor-caju*) as Functional Ingredients in Selected Food Products

Wan Rosli Wan Ishak

Nutrition and Dietetics Program, School of Health Sciences, Universiti Sains Malaysia Health Campus, Malaysia

Abstract

Presently, the prevalence of non-communicable diseases (NCDs) is increasingly growing with the number of diabetic people expected to increase from 171 million in 2000 to 366 million in 2030. This is the main cause of morbidity and mortality all over the world because it can lead to problems in health and influence the quality of life. Excessive consumption of fats and refined carbohydrates coupled with low intake of dietary fibres, particularly from fruit and vegetables, has increased the risk of diabetes, CVD, colorectal cancer and other illnesses. An increase in the quantities and varieties of fibre-containing foods may prevent or treat many of the NCDs. The typical recommended intake of dietary fibre levels is 20-35g/day. Nevertheless, the usual intake for dietary fibres among particularly Malaysian populations is low, which is only 16g/day. So, we have strategies for our research and innovation through the utilization of agricultural by-products which high in dietary fibres in the development of some popularly consumed food products. Theoretically, the dietary fibre enhances the glycemic response by raising the rate of absorption of glucose in the small intestine, thereby lowering the glycaemic index (GI) value. A low GI diet is beneficial to reduce the risks and complications of different health conditions such as diabetes. Our research reveals that incorporation of agro-residual materials from the oyster mushroom in a few processed food products such as patties, frankfurters, cookies, pasta, cakes, muffins and flatbread already successful and scientifically proven in improving the composition of dietary fibre and other essential nutrients, lowering the GI values while not jeopardizing the sensorial acceptability. In brief, low-grade grey oyster mushroom exhibits similar functionality as its premium grade and easily added into various selected food products which are not only tasty but also nutritive and healthful.

Biography

Over the last 16 years, as a young researcher in food technology began to realize the importance of developing food products that have health and therapeutic properties. This is because I'm aware of the increase in the prevalence of non-communicable diseases (especially diabetes, hypertension and obesity) which has been a burden to many Malaysians lately. Realizing this

situation, our group has proactively done research and innovation on the development of therapeutic and functional food products. Our product development strategy focuses on the total concept of food, which uses all parts of edible items of natural products which are based on vegetables, fruits and brown rice.