

Quality and stability of rice bran protein powder at different storage condition

Abstract

Rice bran contain higher amount of protein, vitamins, essential fatty acids, minerals, dietary fiber and sterol attribute to large food application. The possible application of rice bran protein in food industry are hampered due to the limited information on its stability which may be caused by the rancidity due to the exposure of its oil to lipase. Therefore, stability study for protein extracted form rice bran is essential to evaluate the protein quality at different possible storage condition. Three different storage condition was evaluated; 1. Sample 1 (Store in freezer), 2. Sample 2 (Store in close container in room temperature) and 3. Sample 3 (Store in open container in room temperature). Protein was extracted using hot water process at temperature of 120 C for 20 minutes and dried using spray drying process. All sample are monitored for 5 days for its protein composition, water activity, moisture content and pH. The functional group of the sample where analysed using Fourier transform infrared radiation (FTIR). As a conclusion, the storage condition gives an effect on the water activity and moisture content of the rice bran protein product. However, it not given the significance effect on protein concentration and pH.