Effect of water on the caking properties of different types of wheat flour

ABSTRACT

In this study, powder flow analyzer was used to determine the caking characteristics of a different type of wheat flours. Besides the flour type as a variable, three levels of water percentage (12.5, 18.5 and 30 (% w.w.b)) were also tested. The presence of water with the powder plays a significant role in the way the cereals powders pack and flow. Although tapped bulk densities did not vary much, the water had a significant impact on the powder caking strength. The results showed that these parameters were increased significantly as the water level increased for all flours. It is also revealed that different flours cake differently when different levels of water are added. At the highest water content, the caking increase markedly for the flours. Plasticization by addition of water to the food powder is believed to be the essential factor determining the results obtained.