

## **Effect of Garlic and Turmeric Powders on In Vitro Digestibility of the Cooked Rice**

### **ABSTRACT**

Consumers nowadays are interested in foods with low glycemic index (GI) and high indigestible carbohydrate content. In Asia, white rice is the staple food and is generally considered as a readily digestible and high GI food. Occasionally, white rice is cooked by mixing with other ingredients such as herbs and spices. This study is carried out to determine the total phenolic content and the effect of in vitro digestibility on cooked white rice with added garlic and turmeric powders. Rice cooked with addition of turmeric powder (3 % w/w) showed the highest total phenolic content (92.02 mg GAE/100 g) among all the cooked rice samples. The effect of incorporating garlic powder (3 % w/w) and turmeric powder (3 % w/w) into the rice preparation was determined using an in vitro digestion protocol. Results show that by incorporating either garlic or turmeric powder into the rice, starch digestibility was significantly reduced. Rice with added turmeric powder showed a greater reduction in digestibility with significantly lower fraction of rapidly digestible starch (41.5 %; white rice 57.6 %) beside higher fraction of slowly digestible starch (36.1 %; white rice 28.4 %) and resistant starch fraction (22.6 %; white rice 14%). Overall, both spices were able to inhibit starch digestion which can be considered as a potential ingredient in lowering starch digestibility in the cooked rice.