

# **EFFECT OF CONSUMPTION HIGH RESISTANT STARCH TYPE 3 OF *Coleus tuberosus* ON GLUCOSE, LIPID, AND SHORT CHAIN FATTY ACID PROFILE IN NORMAL RATS**

Mutiara Nugraheni<sup>1)</sup> , Siti Hamidah<sup>1)</sup> , Windarwati<sup>2)</sup>

## **ABSTRACT**

This research was conducted to study the effect of processing methods on the starch content of resistant starch in *Coleus tuberosus* and influence of consumption this starch on the profile of glucose, lipids (total cholesterol, triglycerides, Low density lipoprotein, High density lipoprotein) , short chain fatty acid (SCFA) and physical properties digestion in rats. The results showed that the levels of resistant starch in *Coleus tuberosus* by steaming-cooling: 9.5291%; boiling-cooling : 9.1235 % , and oven-cooling: 9.0306%. Steaming-cooling process can be more in control of glucose and lipid profile than boiling-cooling process and oven-cooling process. Short chain fatty acid profiles in all three processes show the greatest proportion is acetic acid, followed by acid propionate and the last is butyric acid. While the physical and chemistry properties of the digestion showed that steaming - cooling process can increase water levels and lowered pH. This study shows that *Coleus tuberosus* flour with the heating and cooling can be continued with increased resistant starch and provide physiological benefits to the profiles of glucose, lipids, SCFA and physical properties digestion. So the *Coleus tuberosus* starch with steaming - cooling process is expected to be utilized for the manufacture of functional foods for people with diabetes mellitus and hypercholesterolemia.

**Keywords : *Coleus tuberosus*, Resistant starch, glucose, lipids, SCFA**