The effect of increasing sucrose concentration in diet toward the content of calcium in tooth of wistar rats

Abstrak:

Sweet represents the quality of taste pleased by human beings since the birth. However, if the consumption of sucrose in the diet is excessive, it can change the calcium balance of the body. The aim of this study was to know the effect from the increased sucrose concentration toward the content of calcium in tooth of wistar’s rats. The experiment used 21 days-age of male wistar rats with body weight from 45 to 50 grams. They were divided into four groups, and each group consisted of 8 rats. Group I got 15% sucrose diet, group II 30%, group III 43% and group IV as a standard diet. Six weeks after treatment, these rats were anesthetized with ether and killed then by decapitation. The lower incisor was separated from jaw, the mass of each fraction was weighted. Atomic Absorption Spectrophotometer (AAS) in mg/g was used to determine the concentration of calcium in wistar’s tooth. One Way Anava test indicated that there were significant differences between group of treatment and the content of calcium in tooth (p < 0.05). Tukey-HSD (Honestly Significance Difference) test indicated that there was a significant difference at group diet of sucrose 43% in tooth. It was concluded that the increased concentration of sucrose in diet could affect the decreased content of calcium in tooth of wistar rats.

Keyword:

sucrose, calcium