



Perchlorate analysis of vegetables grown in Chiang Rai, Thailand

Thaneeya Hawiset^{1*}, Siwaporn Praman¹, Prachak Inkaew²

¹*School of Medicine, Mae Fah Luang University, Thailand*

²*School of Science, Mae Fah Luang University, Thailand*

*e-mail: thaneeya.haw@mfu.ac.th

Perchlorate is one of the contaminants and found naturally in the environment. The consumption of food containing large amount of perchlorate affects the absorption of iodine in human body and interrupts hormone production of thyroid gland. In this work, perchlorate concentrations in five different kinds of vegetables grown in Chiang Rai, Thailand were analyzed. 50 samples of vegetables were collected between January and April, 2016. The analyzed vegetables were cabbage, Chinese cabbage, bok choy, Chinese kale and yardlong bean. The average perchlorate concentrations for cabbage, Chinese cabbage, bok choy, Chinese kale and yardlong bean were 1.26, 5.22, 2.14, 3.56, 1.85 $\mu\text{g}/\text{kg}$, respectively. The levels of perchlorate found in vegetables were much lower than the allowed levels set by European Commission (0.2 mg/kg). If there are no other contaminants, these vegetables are safe for consumption.

Keywords: Perchlorate; Food analysis; Vegetables; Chiang Rai, Northern Thailand