ABSTRACT

ROMYUN ALVY KHOIRIYAH. Bioavailability of Calcium and Iron in Various Cooking Methods of Torbangun Dishes as Part of Diet for Lactating Mothers. Under direction of M. RIZAL M. DAMANI and LEILY AMALIA.

The purpose of this study was to analyze bioavailability of calcium and iron of torbangun dishes in three cooking methods namely boiling, steaming, and stir-frying. The study also aimed to analyze the bioavailability of those minerals in the dishes when combined with carbohydrate and protein food sources namely fried chicken, catfish (Clarias batrachus), or tempe (fermented soybean) using in vitro analysis method. The results of the study showed that there were significant differences among three methods used in this study on the bioavailability of calcium. Further analysis showed that the steaming method had the highest score of calcium bioavailability (p<0.05). In addition, combination of torbangun dishes with carbohydrate and protein sources namely chicken-rice, catfish-rice and tempe-rice showed no significant differences on bioavailability of calcium and iron. Protein in the dishes that cooked with three cooking methods had positive correlation with the bioavailability of calcium, while the bioavailability of iron, positive correlation was only shown on the boiling method. Pearson Correlation analysis showed that tannins, oxalate and phytate had negative correlation with calcium bioavailability of the dishes, whereas phytate had negative correlation with the bioavailability of iron only on the boiling and steaming dishes.

Key words: torbangun, Coleus amboinicus Lour, cooking methods, bioavailability of calcium and iron