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KATHARINE POLPONGSE : THE NUTRIENT COMPOSITION OF READY-TO-COOK FOODS : STIR-FRIED VEGETABLES. THESIS ADVISORS : VONGSVAT KOSULWAT, Ph.D., SOMSRI CHAROENKIATKUL, D.Sc. 124 P. ISBN 974-662-868-2

The lifestyle of urban Thais, especially in Bangkok, gives them little time for food preparation. Ready-to-cook foods are one of their choices for convenient consumption. No study on nutrient composition of these foods has been documented. Therefore, this study aimed to survey the frequency of consumers' consumption of ready-to-cook foods and to determine nutrient composition of the most popular type of ready-to-cook foods. The results of survey showed that stir-fried vegetable dishes were the most popular type. Therefore, eight stir-fried vegetables were randomly purchased from 10 different supermarkets of department stores in the Bangkok metropolitan area. These dishes, namely Phad Phak Boong Fai Daeng, Phad Phak Luan Ruam Mit, Phad Phak Ruam Mit Moo, Phad Priew Waan Moo, Phad Phak Krached Moo Krob, Phad Phak Kana Moo Krob, Phad Phak Kana Pla Kem and Phad Guew Chai Tab Moo, were prepared and cooked by stir-frying. All samples were analyzed for proximate composition, sodium, potassium, calcium, phosphorus, magnesium, iron, vitamin A, β-carotene, thiamin, riboflavin, cholesterol and fatty acids.

Protein level was highest in Phad Phak Krached Moo Krob (12.7 g/100 g) and lowest in the vegetable-only dishes (2.2-2.3 g/100 g). Phad Phak Krached Moo Krob and Phad Phak Kana Moo Krob provided the highest fat contents among all dishes (17.0 and 16.3 g/100 g, respectively). Phad Phak Krached Moo Krob and Phad Phak Luan Ruam Mit provided the highest and the lowest levels of energy (208 and 79 kcal/100 g, respectively). All dishes provided a considerable amount of dietary fiber ranging from 1.9-3.8 g/100 g. Phad Phak Kana Pla Kem contained the highest level of calcium (118 mg/100 g). All dishes contained high amounts of sodium and potassium (276-897 and 168-321 mg/100 g, respectively) due to the addition of fish sauce during cooking. The richest source of iron was found in Phad Guew Chai Tab Moo (7.7 mg/100 g). All dishes provided a considerable amount of β-carotene, ranging from 114-245 RE/100 g except for Phad Priew Waan Moo and Phad Phak Krached Moo Krob. Among stir-fried vegetable dishes, Phad Guew Chai Tab Moo contained the highest amounts of vitamin A (5,278 RE/100 g), and riboflavin (0.45 mg/100 g). Phad Priew Waan Moo provided the highest level of thiamin (0.20 mg/100 g). Phad Guew Chai Tab Moo contained the highest amount of cholesterol (67 mg/100 g). Data on P/M/S ratios varied between 1.1-3.6/ 0.9-1.4/ 1. The ratio showed high content of PUFA in all dishes due to the use of soybean oil as cooking oil.

The nutrient composition data on these foods provides useful information for consumers, physicians, nutritionists, dietitians and other academic personnel and also serves as additional updated information for nutrient databases of Thai foods.