

Determination of folate content in commonly consumed Malaysian foods

ABSTRACT

Currently, data concerning the content of naturally occurring dietary folate in Malaysian foods is scarce. The aim of this study was to determine the folate content of vegetables, fruits, legumes and cereals that were commonly consumed among Malaysians. The total folate content of 156 samples (51 vegetables, 33 fruits, 22 legumes and legume products, and 50 cereals and cereal products) available in Malaysia was determined by microbiological assay using *Lactobacillus casei* (*L. casei*) after trienzyme treatment with protease, α -amylase and folate conjugase (from rat serum). An internal quality control system was used throughout the study by analyzing CRM 121 (wholemeal flour) and CRM 485 (lyophilized mixed vegetables); percent recovery (as mean \pm SD) of 97 ± 2.0 and 101 ± 4.0 was obtained. The range of folate content in vegetables, fruits, legumes and cereals were 1-11 $\mu\text{g}/100$ g and 1-31 on the basis of fresh weight and 1-31 $\mu\text{g}/100$ g and 2-156 $\mu\text{g}/100$ g on the basis of dry weight, respectively. This study has shown that some of these underutilized vegetables and fruits are good sources of folate and could fulfill the recommended dietary intake of total folate.

Keyword: Folate; Malaysia; Vegetable; Fruit; Legume; Cereal