FOLIC ACID CONJUGASE FROM LEAFY VEGETABLES

N. S. Hettiarachchy
(Dept. of Biochemistry, University of Peradeniya)

Naturally occurring folates in foods are mainly in the form of polyglutamates. These polyglutamates are cleaved in the intestine by conjugase to monoglutamate, prior to absorption. The present communication deals with a study of conjugase from leafy vegetables and the finding is that winged bean (*Psophocarpus tetragonolobus*) and sweet potato (*Ipomea batatas*) leaves released food folates from conjugated forms at pH 4.5 (O.1M, acetate buffer). The food folate values obtained by using rat liver and chicken pancreas conjugase was in close agreement with the values obtained by using winged bean leaves conjugase. The folic acid released after the action of conjugase was determined by the radio-isotopic protein binding assay method (Piyasena *et al*, 1977). Folic acid conjugase from winged bean and sweet potato leaves can therefore be used for the estimation of total folates in foods.

The prevalence of folic acid deficiency among pregnant mothers and among women using oral contraceptives in Sri Lanka (Hettiarachchy *et al*, 1979), may be due to the low folic acid content in their food and the losses incurred due to overcooking. Conjugase from winged bean or sweet potato leaves can be used to determine the exact amount of folate available in food before and after cooking.

Financial support from International Atomic Energy Agency, Vienna (RC 2021-SRI) is gratefully acknowledged.

References:

1. Piyasena. R. D., D. A. Weerasekera, N. S. Hettiarachchy and T. W. Wikramanayake (1977) — (in) *Radio Immunoassay and Related Procedures in Medicine*. Vol. II. Proc. Symposium, Berlin, 31st Oct. — Nov. 1977, p. 1977.
2. Hettiarachchy. N. S., K. N. H. Weligama, D. A. Weerasekera and R. D. Piyasena (1979) — (in) *IAEA Research Co-ordination Meeting In — vitro Assay Methodology*. London. July 1979.